10th Annual

Student Academic Conference

April 9th, 2008
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**Purpose**

The purpose of the Student Academic Conference is to showcase the work and talent of MSUM students through presentations, posters and creative works at a one-day conference held annually at MSUM in April in the Comstock Memorial Union. All students are encouraged to submit presentation applications. We strive to accommodate all students who wish to be presenters. Parents, friends, prospective students, alumni, employers and the university community are welcome to attend the conference to witness the excitement of intellectual exchanges among our students.

**Sponsors**

This conference exists because of the work of the entire university community, both in terms of financial and moral support. Supporters include the following: Strategic Grant Initiatives Fund, President's Office, Academic Affairs, Student Affairs, Administrative Affairs, Alumni Foundation, Inter Faculty Organization, MSUAASF, AFSCME, Student Senate, Campus Activities Board, Student Activities Budget Committee and Sodexho Services.

www.mnstate.edu/acadconf
How the Conference got Started

THE ORIGINS OF MSUM’S STUDENT ACADEMIC CONFERENCE

By: Paul Kramer and Brian M. Card

Minnesota State University Moorhead’s Student Academic Conference provides student researchers from each of its four colleges with the opportunity to present their work to faculty, administration, peers, and the general public in a formal academic setting. The Conference has grown exponentially over the past eight years to become one of MSUM’s most eagerly anticipated annual events.

The Conference was conceived in 1998 through the collaborative efforts of Political Science professor, Andrew Conteh, and his then student-assistant, Ryan Sylvester, who envisioned a forum for students to present original research that would reflect the intellectual vibrancy of the MSUM community. As the format of the proposed Conference took shape, Dr. Conteh and Ryan jointly advocated its relevance to the University’s top administrators who expressed both excitement and support for the concept. The enthusiastic participation of both faculty and administration has been a hallmark of the Conference since its inception and remains perhaps its most obvious source of continued success.

Traditionally, the Conference begins with a luncheon held in honor of its presenters, headlined by a keynote speaker address delivered by an MSUM alumnus. The speaker is chosen by the Conference’s faculty advisory committee with the goal of identifying MSUM “success stories” representing the multiple disciplines and career orientations offered at the institution. As part of the presentation, current MSUM students are chosen as panelists who respond to the keynote speaker’s address and present their own personal anecdotes regarding their individual research experiences.

Following the luncheon, students showcase their work in panel discussions, workshops, multimedia presentations, displays and demonstrations throughout the expanse of the Comstock Memorial Union. The Conference’s ever-increasing popularity among students has necessitated moving some of the presentations to Livingston Library in order to accommodate all those who want to share their academic work with their community.

The conference organizers remain committed to encouraging a multi-disciplinary approach to research projects, allowing visitors and guests to explore a panoply of different efforts showing the breadth of opportunities presented in the campus environment. Most of the presentations are limited to twenty minute time periods in order to allow the conference attendees to gain a wide variety of perspectives over the course of the afternoon’s events. The Conference ends with a brief reception that allows participants and attendees to relax, unwind and reflect upon a day of academic exchanges.

Without the support of many different campus organizations and financial contributors including faculty, administrators, support staff and students too numerous to mention individually, the Conference would cease to exist. The organizer’s of this year’s event also wish to note the expansion of support from the Fargo-Moorhead community at large as the program expands and reinvents itself over time. As soon as this year’s Conference ends, planning for the next will begin, with new lessons learned and optimism that each succeeding year will bring a bigger and better experience for the MSUM community.
Letter from the Chancellor

Dear Minnesota State University Moorhead Students, Colleagues, and Friends:

The 2008 Annual Student Academic Conference marks the tenth anniversary of the pursuit of scholarship, achievement, and talent by the Minnesota State University Moorhead community. I am proud to join with President Roland Barden, conference founder Dr. Andrew Conteh, and the university’s supporting faculty and staff to recognize our participating students.

The Student Academic Conference has become an annual celebration, a tradition, but it also has set the pace for student achievement across the Minnesota State Colleges and Universities system. Likewise, the leadership of President Barden has been the model for scholarly pursuit and collegial encouragement. As I so often have observed, the public university is a special place. Here, we are encouraged to challenge, to question, and to ponder. This environment is demonstrated enthusiastically and vigorously at Minnesota State University Moorhead.

On behalf of the Board of Trustees and all of us in your Office of the Chancellor, please accept our appreciation for the commitment that the conference advisor, planners, volunteers and all students, alumni, mentors, faculty, and staff have made to make the conference a success. Best wishes on this Tenth Annual Student Academic Conference.

Sincerely,

[Signature]

James H. McCormick

Letter from the President

Greetings:

This year we celebrate the tenth anniversary of the Student Academic Conference! From its inception, the conference offered an outlet for student research and creative work. Over the years thousands of students shared their knowledge in an environment that promoted inquiring minds and faculty mentoring.

MSU Moorhead Professor Andrew Conteh loves a great idea and ten years ago he was tireless in his advocacy for this conference. From the beginning, it provided opportunities for collaborations between students and their faculty mentors. Mentoring is central to our teaching and learning activities.

Presenting one’s work beyond the classroom promotes student growth and development. The conference provides students the challenge and the pleasure of communicating to an interested audience—and important feedback in critiques of their intellectual products. Defending ideas in a supportive and analytical community of student and faculty scholars is a wonderful opportunity for personal professional growth.

You will encounter intellectual curiosity and creativity. You will learn about new ideas, fresh approaches, and unique methods of problem-solving. Most importantly, you will witness the next generation of scholars and leaders.

Congratulations to the student participants, faculty mentors, and conference planners who’ve worked to prepare for a conference that celebrates the mission of our University “to foster excellence in teaching and learning.” A decade ago, this was a very good idea—today, it’s a wonderful tradition!

[Signature]

Roland E. Barden, Ph.D.
President
Conference Participants:

There are so many reasons that the Minnesota State University Student Academic Conference became a tradition after its initial offering. Student learning and excellent faculty teaching are what we are about, and nothing is more appropriate for us to celebrate than student achievements in scholarship, research, and creative activity.

It seems that more and more attention is focused on institutional collaborations and partnerships. In that context, it is so important always to remember that the most significant collaboration is between student and teacher, learner and mentor. Today, we all have the opportunity to learn from the results of so many truly special partnerships.

As you make your selections and visit the poster sessions, be certain to ask the student presenters questions about what they have accomplished and what each envisions the next step to be. Also, please take time to thank the faculty mentors for their efforts—without them the rewarding day you have ahead of you would never have happened.

Yours truly,

Bette G. Midgarden, Ph.D.
Vice President for Academic Affairs

Letter from the Vice President of Student Affairs

Welcome to this year’s Student Academic Conference. This event has become one of the premier events of the year for students participating in an academic event that is unique, rewarding and challenging. Having been a session chair for many of the past conferences, I have observed firsthand the hard work, dedication and research that have been focused on the wide variety of interesting topics. I’ve always come away with new perspectives and items of interest that have been part of the presentation or later conversation. I have especially enjoyed those presentations that blend the research and classroom experiences with those activities that are learning experiences outside of the classroom. Making connections between one’s academic endeavor and the other activities you may be involved with such as leadership opportunities within student organizations, student government, athletics, residence life or a unique employment experience can lead to a truly enriching experience.

Congratulations and many thanks to all who are participating, those that are responsible for coordinating this experience from start to finish, and those faculty and staff who support the participants and event in so many ways. Thanks to everyone that helps to make the Student Academic Conference a very special day.

Warren Wiese
Vice President
Letter from the President of IFO

The Faculty at MSU Moorhead commends all those involved in the Student Academic Conference. Special recognition must, of course, go to Professor Andrew Conteh, who is the driving force in providing this wonderful opportunity to our campus.

As we look at what we as a University need to be doing, we can't help but see the many ways this conference reinforces our goals of developing students who can think critically, engage in research, and express themselves professionally in both oral and written communication.

As faculty, we are proud of our students and the work they have put into making this a success for themselves and all of us at Moorhead.

Have a great day!

Cindy Phillips
President
MSU Moorhead
Faculty Association

Letter from the Executive Vice President of Alumni Foundation

The great Albert Einstein once humorously described his work by saying "If I knew what I was doing, it would not be called research, would it?" If you analyze this statement, however, you see that he was being quite profound. It is research that opens up the unknown for us, that brings us to be doing new things with new purposes. To begin such exploration as an undergraduate student is a unique and special privilege.

We are so fortunate here at Minnesota State University Moorhead to have the privilege to conduct research as undergraduates and then to showcase that work here at our annual Student Academic Conference. We congratulate all participants, present and past, and we look forward to many of you having careers that, like Einstein, are involved in reaching into the unknown to find new solutions for mankind.

Patrick D. Hundley
Executive Vice President
Minnesota State University Moorhead Alumni Foundation, Inc.

Letter from the President of the Student Senate

Greetings All-

The Student Academic conference is once again upon us and the students of this university are busy preparing a variety of different projects and presentations for this event. While I myself have not presented at this event, I have had the pleasure of attending the conference and have always come out knowing something I hadn't before I went in. The Conference's ability to bring a wide variety of students together to represent knowledge in the various fields of study our university has to offer is what makes this event so beneficial to not only the presenters, but the attendees as well.

Of course the event wouldn't even take place if it were not for the dedication by its director, professor Andrew Conteh. His diligence in making this event bigger and better every year is most appreciated. From the planning stages of the Student Academic Conference to the event itself he always ensures student participation is the cornerstone of this event. Conteh's contribution to the conference is the fuel that keeps the engine of the Student Academic Conference going.

As a representative of the student body, I believe it is important for the students to be a part of as many areas of college life as possible. The ability of the Student Academic Conference to combine the extracurricular and academic aspects of MSUM is a valuable venue for this type of student involvement.

So, whether you're a freshman Mathematics major or a fifth year senior English major, the Student Academic Conference has a place for you.

Sincerely,

Jered Weber
President
MSUM Student Senate
Conference Schedule

Wednesday, April 9, 2008

7:30 A.M. Poster Set-ups – Registration/Information Table – CMU Main Lounge

10:30 A.M. Presenter Registrations – Registration/Information Table – CMU Main Lounge

11:15 A.M. Seating for the Luncheon – CMU Ballroom

11:30 A.M. Luncheon Starts (Welcome and Introductions) – CMU Ballroom

11:50 A.M. Keynote Speaker – CMU Ballroom
  Dr. Karen Branden
  Assistant Professor, Sociology & Criminal Justice

12:20 P.M. Student Panelist Respond – CMU Ballroom
  • College of Arts and Humanities representative will be Debbie Pestka, a Chemistry and Spanish double major.
  • College of Business and Industry representatives will be Casey Swenson, a Construction Management major and Lindsey Swenson, a Finance and Accounting double major.
  • College of Education representative will be Krystal Dassinger, a Speech Hearing Sciences major.
  • College of Social and Natural Science representative will be Sherryse Mayo, a Psychology major.

1:00 P.M. Presentation Session 1 and Poster Session 1 –
  Various CMU Rooms and Poster Display Area

2:20 P.M. Break

2:30 P.M. Presentation Session 2 and Poster Session 2 –
  Various CMU Rooms and Poster Display Area

4:00 P.M. Closing Ceremony – CMU Main Lounge
  Refreshments sponsored by Counseling and Personal Growth Center
Conference Organizers And Steering Committee

PROGRAM COMMITTEE
Ashish Gupta
Barb Hoppre
Chizuko Shastri
Christine Malone
Richard Lahti
Rose Bakke
Ruth Lumb
Dr. Conteh
Justin Voels
Samm Daugherty

LOGISTICS COMMITTEE
Layne Anderson
Travis Dolence
Nina Johnson
Rebecca Gardner
Aaron Quanbeck
Hardy Koenig
Dr. Conteh
Justin Voels
Samm Daugherty

How to Get Involved?
If you are interested in being a part of the steering committee for the Student Academic Conference next year, a conference volunteer, or interested in being a student organizer, please send an e-mail expressing your interest to acconf@mnstate.edu

PAST KEYNOTE SPEAKERS
2007 – Anita Sue Bement Education
2006 – Tammy J. Miller, CPA, Business
2005 – Todd Marvin Koel, Ph.D, Biology
2004 – Thomas C. Proehl, Theatre
2003 – Dr. Tom Sawyer, Chemistry
2002 – Kimberly Maluski Sarte, Economics
2001 – Dr. Paul Spies, Education
2000 – Dr. Janet Anderson, Education
1999 – Dr. Shawn Dunkirk, Chemistry
Keynote Speaker

Each year an MSUM alumnus is selected to deliver the keynote address to conference attendants. This person is selected by the conference steering committee following a review of nominations received from members of the MSUM campus community. This year’s Keynote Speaker is:

Karen Branden

Karen Branden was born in Houston, Texas but spent most of her formative years in Barnesville, Minnesota. Upon graduating from high school she worked for a year before being admitted to MSUM’s Corrick Center. She credits the Corrick Center with her academic achievements and success. In 2003 she was honored to receive the Delmar G. Corrick Spirit and Vision Award.

While at MSUM she “found her future” and was immediately seduced by sociology. In 1991 she graduated cum laude from MSUM with a B.A. in Sociology and a minor in Women’s Studies. She began her academic presentations while at MSUM and gave a formal talk on pornography at a Women’s Studies session and at a conference at North Dakota State University.

Upon graduation she received a position in the admissions department at MSUM. Education was constantly calling so she went into a Masters program at NDSU and in 1995 she received her M.S. in Sociology.

In 1997 she lived in Kuala Lumpur, Malaysia with her husband Dennis Jacobs and taught computers to high school students of low income families. During their time in South East Asia they traveled to Indonesia, Thailand, Hong Kong and extensively around Malaysia assessing environmental impacts over time.

In 2002 she received her Ph. D. in Sociology after being hired the previous year by Bemidji State University. While at BSU she gave a number of presentations related to her dissertation topic “Negotiations between Anishinaabe and an Outside University” focusing on the relationship between a Minnesota American Indian tribe and a large land grant university as they discussed “rights” over wild rice.

In 2005 she was hired by Minnesota State University Moorhead as an Assistant Professor in Sociology. Now in her third year at MSUM she is excited to be back home.

In December of 2006 she was honored as the keynote speaker at the Fluid and Thermal Energy Conversion Conference in Jakarta, Indonesia. She spoke about engineers being “hidden heroes” as they work on sustainable energy for the future of the world.

Her research history involves a variety of topics including pornography, wild rice “rights”, engineers working on sustainable energy technology, and tribal membership with the Red Lake Anishinaabe tribe. She has recently co-authored a book titled, “From McEnergy to EcoEnergy: Americans’ Transition to a Sustainable Future” written with her husband Dr. Dennis Jacobs. She and her husband are beginning to offer presentations about sustainable energy in the Northwest region of Minnesota.

Dr. Karen Branden’s keynote address will discuss the important role MSUM and the Corrick Center has had in her life over the years. She will also discuss the various research activities she has completed. She will then move on to her excitement at being hired as an Assistant Professor of Sociology at MSUM. She will focus on MSUM’s Green Fee and the Sustainable Campus Initiative Committee as part of her passion for environmental issues, the research she has been working on this area, and the recent completion of a book co-authored with Dr. Dennis Jacobs titled From McEnergy to Ecoenergy: Americans’ Transition to a Sustainable Energy. All of Dr. Karen Branden’s accomplishments tie back to the foundation built at MSUM. Her keynote address is titled, “Dragons Roar into a Sustainable Future.”
Student Panelists

Each year four student panelists are selected to respond to the keynote address. These four students represent the four academic divisions of the university: Arts & Humanities, Social & Natural Sciences, Business & Industry and Education & Human Services. These students are selected by the dean of each academic division following a review of nominations received from members of the MSUM campus community. This year’s panelists include the following:

Debbie Pestka is a junior double majoring in Spanish and chemistry. She has received several scholarships including the Rochester Kiwanis Student of the Year scholarship, the Mayo Clinic Foundation Scholarship, and the MSUM President’s honors scholarship. Last spring she was also awarded the CRC Press Chemistry Achievement Award. Debbie is a member of MSUM’s Spanish, math, and chemistry clubs. She served as president of the math club her sophomore year and is currently serving as co-president of the Spanish club. Her work with Spanish club involves organizing Hispanic culture events, volunteering within the Hispanic community at the Centro Cultural in Moorhead, and fundraising for hurricane relief for Nicaragua and Honduras. This past fall she was inducted into the National Collegiate Spanish Honors Society, Sigma Delta Pi. This will also be her fourth semester working as a math tutor. Debbie hopes to attend pharmacy school after graduating in May, 2009.

Casey Swenson is a senior, majoring in Construction Management. He has been an active member of Construction Management Society for the past three years and is the president of Sigma Lambda Chi Construction Management Honor Society. He is a member of the Dean of Business and Industry’s Student Advisory Board and was a recipient of the FM Home Builder’s Association scholarship during 2007. He was also involved with the Dragon Baseball Club. He is interning with Manning Mechanical in Fargo, studying mechanical systems.

Lindsey Swenson is a senior, double-majoring in Accounting and Finance. She is a recipient of the Honor’s Apprentice Scholarship, and has spent four years working in the Small Business Development Center at MSUM. She has been active with Financial Management Association for the past three years, and has been named both secretary and president. She has been the recipient of multiple accounting scholarships and is a member of the Phi Kappa Phi National Honor Society. Lindsey is interning with Northwestern Mutual Financial Network in Fargo and was featured in “Young Money” magazine after being ranked third in the country based on production.

Sherryse Mayo is a current Psychology major at MSUM. She has spent much of her undergraduate career focusing on research in the area of child development. Topics of research include the development of motion parallax in infancy, the development of size constancy in childhood, and the development of auditory scene analysis in childhood. During her undergraduate career she has received many awards including a conference presentation award at the Red River Psychology Conference and a research award at the Midwestern Psychological Association Conference in Chicago. In addition, she is the president of the MSUM chapter of Psi Chi, the National Honor Society in Psychology. Sherryse will be graduating Summa Cum Laude in May 2008 and will then continue to her graduate career at the University of Minnesota, Institute of Child Development. Sherryse hopes to receive her Ph.D. in child development psychology and continue on to teach at the University level.

Krystal Dassinger is a senior majoring in Speech-Language, Hearing Sciences with an emphasis in Pre-Audiology. She has received several academic scholarships throughout her college career including the MSUM upper-class scholarship her junior year. Krystal is currently the Service to Mankind’s (SERTOMA) student representative at MSUM. Through this organization, she is an active volunteer in many community events. She is also a local and national member of National Student Speech Language and Hearing Association (NSSLHA). Krystal will be graduating in May, 2008 with Summa Cum Laude honors. She then plans on attending an Audiology Doctoral Program in the fall of 2008.
Juried Student Art Exhibition

The Juried Student Art Exhibition is an annual event open to all registered art majors during the spring semester at MSUM. This year’s exhibition will be on display from March 28 - April 9 in the gallery, located in the Roland Dille Center for the Arts. The juror for the 2008 Juried Student Art Exhibition at MSUM this year is Nick Cave, installation/Performance Artist, Fashion Designer and associate professor and Chair, Fashion Design, at the School of the Art Institute of Chicago.

Cave grew up in Missouri, and earned a BFA from the Kansas City Art Institute in 1982, and an MFA from the Cranbrook Academy of Art in 1989.

His work has been exhibited in museums and galleries in the United States and Europe, including the American Craft Museum and Studio Museum in Harlem, the Mattress Factory in Pittsburgh, and the Arts Connexion in Amsterdam. He is represented by Jack Shainman Gallery in New York.

Work in the exhibit will include; drawing, painting, sculpture, graphic design, ceramics, printmaking, and photography. Gallery hours are 10-5PM Monday and Friday
10-6PM Tuesday, Wednesday and Thursday
Saturday 1-3PM
Sunday 2-4PM
There is no admission fee.

Theatre Arts Department Exhibition

Throughout the year the Theatre department at MSUM offers a wide range of classes and activities that are open to all MSUM students and provide opportunities that hone skills, develop professional networks and provide additional educational functions. The MSUM Theatre Department is pleased to present some examples of these offerings during the 2008 Student Academic Conference.

The Power of Dance

There is a certain mystique to women and men who can move their bodies in amazing and beautiful ways. Dance is as much a part of the world's artistic history as literature, music, or the visual arts, and its beauty is just as varied and complex. MSUM students in Dance for the Stage II will perform "works-in-progress" as they prepare to dance on the upcoming dance showcase.

Wednesday, April 9th
Type: Demonstration
Locale: Nemzek 208
Time: 3:30 p.m.

The Kennedy Center American College Theatre Festival: The Audition Process

An audition is a sample performance by an actor, singer, musician, dancer or other performing artist. It is used in the casting process to demonstrate the level and range of a performer's talent, and functions as a job interview for the performing arts. MSUM students will showcase audition packages created for the Kennedy Center American College Theatre Festival and the Irene Ryan Acting Competition.

Wednesday, April 9th
Type: Demonstration
Location: Fox Recital Hall, CA 150
Time: 2:00 p.m.

A Mini-Drama: An Original One-Act Play

A one act play, or more commonly "one act", or "one-act", is a short play which tends to be simpler and have fewer props, scenery and cast members. Although a one-act may be simpler by definition, it does not diminish the dramatic impact or intent of the playwright. The origin of the one act play can be traced back almost to the very beginning of drama. The Cyclops, a satyr play by Euripides, is an early example of the one act play. Join MSUM students as they present a concert reading of AN OLD ALBUM, the Kennedy Center American College Theatre Festival Region V's winner of Best Play.

Wednesday, April 9th
Type: Demonstration
Location: Fox Recital Hall, CA 150
Time: 1:30 p.m.
## Session Chairs

### 1:00 - 2:20 Session

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<td>Roland Barden</td>
<td>CMU 204</td>
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<td>Jane Bergland</td>
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<td>Laurie Blunsom</td>
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<td>Ellen Brisch</td>
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<td>Henry Chan</td>
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<td>Derek Dalhouse</td>
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<td>Travis Dolence</td>
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<td>Mary Dorsch</td>
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<td>Peter Geib</td>
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<td>Denise Gorsline</td>
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<td>Dawn Hammerschmidt</td>
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<td>Stephen Hamrick</td>
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<td>James Hatzenbuhler</td>
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<td>Jean Hollaar</td>
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<td>Patrick Hundley</td>
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<td>Ronald Jeppson</td>
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<td>Daniel Kirk</td>
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<td>Cecilia Mafia-Bustamante</td>
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<td>Doug Peters</td>
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<td>Paul Sando</td>
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<td>Tammie Schmiess</td>
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<td>Barb Seiler</td>
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<td>Chizuko Shastri</td>
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<td>Terry Shoptaugh</td>
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<td>Benjamin Smith</td>
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<td>William Violet</td>
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<td>Marsha Weber</td>
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<td>Deb White</td>
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<td>Warren Wiese</td>
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### 2:30 - 3:50

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<th>Name</th>
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<tr>
<td>James Anderson</td>
<td>CMU 200A</td>
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<td>Janet Haak Aramess</td>
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<td>Karen Branden</td>
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<td>Linda Fuselier</td>
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<td>Hardy Koenig</td>
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<td>Shawn Ginther</td>
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<td>Adam Goyt</td>
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<td>Martin Grindeland</td>
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<td>Ashish Gupta</td>
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<td>Dennis Jacobs</td>
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<td>Nina Johnson</td>
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<td>Paul Kramer</td>
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<td>Sara Leigh</td>
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### Schedule by Room

#### CMU 101

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<td>An in depth study of the style of Wes Montgomery, and how the study of a master improviser can influence a student.</td>
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<td>Human Rights and the United Nation: A Wolf in Sheep's Clothing?</td>
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<td>Living with ethnic and cultural differences of others</td>
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<td>St. Augustine: Doctrine of Teaching</td>
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<td>The Effects of Geomagnetic Field Alterations on larvae of a migratory dragonfly</td>
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<td>The Empress Wu Tse-t'ien: Gaining Legitimate Ground as China's First and Only Female Emperor</td>
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<td>The Importance of Volunteering in the Lives of the Elderly.</td>
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<td>Analyzing Crime: A Mathematical Model</td>
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<td>Utilizing the 5E Model to teach two lessons in human physiology</td>
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<td>Searching for cryptic Species within the genus Metzgeria using sequence data and ISSRs</td>
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<td>The Payoff of Self-Directed Work Teams</td>
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<td>The Rise of a Russian Francophile: Marie Bashkirtseff</td>
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<td>Martin Smith or Martin Luther? Two in the same?</td>
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*Numbers correspond with abstract listings beginning on page 32*
• CMU 214

Session 1
1:00 213 Sustainability initiatives in the Costa Rican coffee industry in need of reform
1:20 217 A comparison of forest tree diversity between tropical and temperate rainforests.
1:40 163 The comparison of two reserves in Costa Rica, Cabo Blanco and Monteverde.
2:00 224 The Effects of Tourism on the Nicoya Peninsula, Costa Rica By: Heather, Justin, Renee, Jesse and Julie

Session 2
2:50 122 Vietnamese Refugees and Mental Health: Causes and Treatment for Mental Health Issues
3:10 124 Ultraviolet radiation thresholds for gemmae of three liverwort species, Marchantia polymorpha, Marchantia inflexa, and Marchantia paleacea
3:30 111 Nathaniel Courthope: The Unsung English Hero Who Created An Empire

• CMU 216

Session 1
1:00 145 Cyber Crimes: Identity Theft
1:20 146 Feasibility Study of Sustainable energy on MSUM campus.
1:40 79 Mirando hacia el sur: Reflections on Language, Literature, and History in Latin America.

Session 2
2:30 99 Urban Growth Boundaries and Housing Prices
2:50 107 An analysis of the international automobile industry
3:10 127 Hildegard a Women Composer in a Man's World
3:30 128 The Interpretive Role of the Shultz Site Ceramic Collection in Northeast Plains Prehistory

• CMU 218

Session 1
1:00 134 A View of Women Administrators in Higher Education
1:20 135 The Neutral Comet Assay for DNA Damage
1:40 187 Forecasting Crude Oil
2:00 166 English, A Dying Language?

Session 2
2:30 168 The Highways and Byways of Language: A Comparative Study between Spanish and English
3:10 160 Roman Sexuality: The Dynamics of Gender
3:30 69 Searching for Cryptic Species: Assessment of Genetic Variation Among Marchantia inflexa Populations Using Inters-Sequence Simple Repeats
3:30 95 The Road through The Lord of The Rings

• CMU 227

Session 1
1:00 174 Feasibility Study of the Vaisala GMP222 Probe and GMM222 Monitor in the Atmospheric Sounding of Carbon Dioxide.
1:20 137 Credit Card Fraud
1:40 57 The fight against HIV/AIDS
2:00 152 Mothers' use of facilitating techniques before and after Parent-Child Communication Program training

Session 2
2:30 102 US Coal Supply: a Mathematical Projection of Coal Reserves and Why We Need to Search for an Alternative Resource
2:50 157 A Study of Accounting Majors' Ability to Recognize Fraud Risk
3:10 154 The Evolution and Maintenance of Committed Interpersonal Relationships in Virtual Reality: Is Real Life Different from Second Life?
3:30 153 Multinational Corporations and Human Rights

• LI 208

Session 1
1:00 182 Series of Lessons addressing Global Climate Change
2:00 78 The bombing of Hiroshima and Nagasaki as captured on film

Session 2
2:30 268 Creating the Student Academic Conference Promotional Video
3:00 261 Our Process, Our Writing: MFA Students Share Their Thoughts About The Writing Process

• LI 222

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1:00 215 Don't Ask Don't Tell
1:20 41 The Policy of Same-Sex Marriage
1:40 248 Reauthorization and Improvement [?] Act of 2005: Patriot Act
2:00 235 Endangered Species Act - Still Controversial 35 years Later?

Session 2
2:30 247 Climate Security Act
3:00 189 Reforming Health Care
3:20 273 "If the Genes Don't Fit, You Must Acquit." A Look at Paternity Fraud Legislation in California
3:40 249 Changes in No Child Left Behind

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### CMU Underground

#### Session 1

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<td>Communicative Strategies when Interpreting a Foreign Language</td>
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<td>Genre and Gender: Negotiating Gender Identity in Spaces In Extremis through Speech Acts.</td>
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<td>Disability and Stratification: Comparing Two Perspectives</td>
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<td>America as Reflected in African-American Literature</td>
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<td>An Examination of “Glass-Ceiling” Barriers by White Women and African-American Women in Corporate America</td>
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### CMU Main Lounge

#### Session 1

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<td>Decorated Ceramics from the Biesterfeldt Site: A Stylistic Analysis</td>
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<td>Jalapa, Nicaragua: A Transcultural Experience</td>
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<td>Aging, Loneliness and Isolation</td>
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<td>Asymmetric synthesis of novel pyrazolidinone compounds using chiral relay and face shielding</td>
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<td>Returning to Toy Guns: A Child Soldier after the Conflict Is Over</td>
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<td>Examining the affects of caffeine on oxidative stress, beta-amyloid production, and mtDNA damage in laboratory mice</td>
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<td>Can You Hear Me Now? Technology and Learning For Deaf Students</td>
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<td>Bellemite Rostrum used as an Indicator of Marine Flooding Surfaces in the Jurassic Sundance Formation: Seminole Reservoir Wyoming, USA</td>
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<td>Understanding Email Overload and its Implications on Workplaces</td>
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<td>The effects of 9-hydroxy Xanthene on the erythrocyte membranes of hypertensive and normotensive male rats.</td>
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10
Title: Survey Results (2003-2007) of Wild Turkey (Meleagris gallopavo) Distribution and Human-Turkey Interactions in Cass (ND) and Clay (MN) Counties
Presenter(s): Amanda LaPlanle, Ashley LaPlanle, Megan Zadach, Todd Zielinski
Department: BIOL
Advisor: Donna Stockraham
Abstract: This study was initiated in 2003 with an initial objective of using mail surveys to estimate the minimum wild turkey (Meleagris gallopavo) population in the Red River Valley (RRV) in the Fargo, North Dakota/Moorhead, Minnesota, area. The RRV offers suitable turkey habitat in a relatively narrow corridor surrounded by a dense human population. In 2004, urban human-turkey interactions were monitored as well, adding in 2005, a survey to assess public opinion on wild turkey management options in the event abatement measures were necessary due to problematic urban turkeys. A follow-up survey was created in 2006, to see if changes in survey respondents opinions occurred. In 2007, we did a slightly different follow-up survey which was mailed only to former respondents. Turkey observations reported from 2003 through 2007 show a strong turkey population thriving in the RRV, with a steady increase in numbers and sightings. In 2004, 12.5% of survey respondents (respondents = 40, out of 150 mailed surveys) reported negative human-turkey interactions. In 2005, negative reports rose to 24% (respondents = 75, out of 500 mailed surveys). In 2006, negative human-turkey interactions dropped to 7% (respondents = 190, out of 537 mailed surveys). In 2007, negative human-turkey interactions increased to 10% (respondents = 115, out of 220 mailed surveys). Negative interactions included such things as turkeys blocking traffic routes, entering yards, eating from bird feeders, gardens, and aggressive behaviors. Public opinion surveys of management options for abatement indicated that in 2005, 2006, and 2007 that 61.3% (46 out of 75 respondents), 57% (85 out of 149 respondents), and 63% (30 out of 115 respondents), respectively, agreed or strongly agreed with a turkey hunting season to reduce potential problems.

12
Title: Herpes
Presenter(s): Marisa Orme
Department: AT
Advisor: Dawn Hammerschmidt
Abstract: Herpes has a high prevalence in wrestling and this specific disease is a concern for some athletes. Herpes is a viral infection that cannot be killed once inside the body. A symptom of the herpes viruses is a skin lesion that usually has this creeping or spreading nature. The Herpes viruses are unique in their biologic properties. Once the virus is inside the body it invades and replicates in the nervous system and then establishes a site of latent infection. We will focus on three of the most common herpes viruses, Herpes Simplex 1, Herpes Simplex 2 and Herpes Gladiatorum. Specifically on common signs and symptoms, treatment, transmission, and how it affects athletes.

13
Title: Spina Bifida: Mylomenigocele
Presenter(s): Lynsie Johnson
Department: AT
Advisor: Dawn Hammerschmidt
Abstract: Spina bifida is a neural tube defect that occurs within the first twenty eight days of a women's pregnancy. This particular neural tube defect occurs in 1 in every 1,000 births in the United States. The third and most serious type of Spina Bifida is mylomenigocele, the type where the vertebrae fail to fuse and the meninges and the spinal cord protrude which in turn causes improper development of the spine and damage to the spinal nerves. The are many impairments involved with this neural tube defect disorder that in return causes individuals with spina bifida to have many orthopedic needs and different types of treatments to maintain a good quality of life. Spina Bifida is a type of neural tube defect that we must be aware of and educated on.

14
Title: Darfur's Manufacturing Consent
Presenter(s): Stephan Johnson, Nathan Mack
Department: POL
Advisor: Andrew Conlah
Abstract: In the southern part of Sudan highlights the new Cold War over oil. The rise in oil demand in China has led Beijing to embark on a policy the 'dollar diplomacy'. Africa is a major focus particularly the region between Sudan and Chad. Darfur is a major battleground for a contest for control of oil. China has been more successful so far at securing the oil at the source. However the USA is slowly manufacturing consent of its nation state through its media outlets and Washington is covertly making arrangements. Energy resources are reshaping the geopolitical map. Is a new conflict beginning to emerge?

15
Title: The Human Factor: The need for human translation in an electronic world
Presenter(s): Thomas Hill
Department: SPAN
Advisor: Benjamin Smith
Abstract: In today's world of instant information, the skill of translation is increasingly dealt with by machines. This presentation examines the need for human translation and interpretation, what it entails, problems with machine translation and the ethics of proper translation and interpretation.

16
Title: An in depth study of the style of Wes Montgomery, and how the study of a master improviser can influence a student
Presenter(s): Jackson Lee
Department: MUS
Advisor: Daniel Phillips
Abstract: This presentation will focus the style of one of the great jazz guitar players, Wes Montgomery. I will demonstrate how through the process of transcribing and learning one of his solos, I was able to learn from his playing. I will show how I incorporated some of his style into my own by constructing my own solo, as well as speaking about his life and experiences.

17
Title: What Are Supermax Prisons All About
Presenter(s): Jason Opitz
Department: LGST
Advisor: Paul Kramer
Abstract: Supermax prison facilities deal with the worst of the worst criminals. These facilities are positioned all over the United States with the intention to bring about improvements for individuals that are in need of rehabilitation. The question that needs to be asked here is whether or not this goal or similar ones are ever achieved. This article will reveal just what happens to inmates that are rehabilitated in supermax prisons.

18
Title: Reflections: A Student to Student Service Learning Project
Presenter(s): Fay Pary
Department: ED
Advisor: Steven Grineski
Abstract: This poster reflects an incredible learning experience between Minnesota State University Moorhead (MSUM) education students and the Red River Area Learning Center (RRALC) students. These photographs were created by "Aly" a RRALC student and me during our Student to Student Service Learning Project. The commentaries are my reflections and expressions of my questioning, thinking, learning and personal growth gained from my interactions with "Aly".
Title: Rhabdomyolysis
Presenter(s): Elizabeth Thon
Department: AT
Advisor: Christopher Huot
Abstract: In Seattle, Washington, a 33-year-old Tanya Rider got into a car accident that left her trapped in her vehicle for eight days. Once located and safely removed from her SUV, she was immediately taken to Seattle’s Harborview Medical Center, where she was listed in critical condition. Rider suffered severe injuries possibly resulting in amputation of one of her legs. She also experienced kidney failure due to toxins being released into her blood caused by her muscle injuries and dehydration. The condition Tanya Rider suffered from is known as rhabdomyolysis. I believe that if this disease is relevant to the athletic world and can lead to death, we, as medical professionals, should become more familiar with this almost unheard of condition, rhabdomyolysis.

Title: Scleroderma
Presenter(s): Lyne Zieske
Department: AT
Advisor: Christopher Huot
Abstract: Scleroderma is a rheumatological disease of unknown cause. It presents itself as calcifications in the extremities and joints. It also affects internal organs such as the heart, lungs, kidneys, and gastrointestinal tract. Severity of affected organs can lead to death because there is no cure.

Title: Meeting the Needs of an Autistic Child: The Story of a Kindergartener ELL Learner
Presenter(s): Melissa Powlish
Department: ECE
Advisor: Doris Walker-Dalhouse
Abstract: A case study was conducted on a kindergarten ELL student with autism. Findings from a series of assessments to determine his strengths and weaknesses in various subject areas will be shared, as well as, a comprehensive instructional plan to address his needs by providing instructional strategies that build upon his academic and linguistic needs.

Title: The Empress Wu Tse-t’ien: Gaining Legitimate Ground as China’s First and Only Female Emperor
Presenter(s): Megan Sorensen-Krueger
Department: HIST
Advisor: Henry Chan
Abstract: The purpose of this presentation is to examine the political career of China’s first and only female emperor. Wu Tse-t’ien ruled over the T’ang Dynasty for nearly forty years during the latter portion of the 7th century C. E. Historians have filled the story of Empress Wu with accounts of malicious actions taken to satisfy her own selfish political endeavors. In responding to these remarks my intent is not to deny or try to disprove the empress’ involvement in any of the things; rather, it is important to realize that actions such as ridicing yourself of opponents and squashing rebellions are habitual occurrences throughout the world’s political history. It is also true that the same histories that complain of a woman who overstepped her political bounds to usurp the T’ang throne also contain evidence that clearly points to a peaceful and prosperous dynasty that accepted their empress as their legitimate sovereign. The bulk of my research focused on the devices by which Wu Tse-t’ien was able to gain and maintain her legitimate claim to the throne until her death in 705.

Title: Living with Ethnic and Cultural Differences of Others
Presenter(s): Vaneehla Dusoruth, Dominique Rolando
Department: CMST
Advisor: Theresa Hest
Abstract: The presentation will be an informative expose on living with ethnic and cultural differences of others. We will explain the importance in our current world to be able to cope with difference. We will talk on globalization and international connections to any job in our modern world. We will then explain how the image of different cultures should not be a stigmatized one anymore. We will talk about the concept of respect and the acceptance of difference. Then, we will extrapolate on difference as something that might benefit anybody and provide them with a better knowledge of the world and various school of thoughts. The presentation will also include some examples of how and why culture clashes occur and how they should be avoided.

Title: Permutation Statistics and q-Fibonacci Numbers
Presenter(s): David Mathisen
Department: MATH
Advisor: Adam Goyt
Abstract: We consider the distributions of permutation statistics on reduced sets of permutations. We shall focus on the distribution of the inv statistic over reverse layered permutations. This distribution will give us a q-analogue of the Fibonacci numbers, Fn(q). We will use these q-Fibonacci numbers to bijectively prove a q-analogue of the following Fibonacci identity, Fn+1 = FnFn+1Fn-1.

Title: Industry Study
Presenter(s): Eric Sobolik
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: A thorough study of an industry is presented using economics. The industry is viewed using economic theory and models. The collection of data on trade and pricing for the selected product allows insight into the topics of international trade and market demand. Any industry shocks or trade policies that greatly affected the products availability and demand are covered.

Title: St. Augustine: Doctrine of Teaching
Presenter(s): Bridget Potocki
Department: HON
Advisor: Annette Morrow
Abstract: St. Augustine is the founder of modern theology; however, many of his ideas were not original. St. Augustine borrowed heavily from the philosophers and politicians of ancient Rome and Greece. Augustine borrowed heavily from the Plato and from Cicero; Plato provided a framework for religious doctrine while Cicero provided structure for how sermons should be composed and delivered. Augustine’s two texts, On Christian Doctrine and the City of God, helped to establish a new Christian-Roman culture by melding the tenets of classic Hellenistic cultures to the relatively young religion of Christianity.

Title: Education through Model United Nations
Presenter(s): Katherine Dolney
Department: POL
Advisor: Andrew Conteh
Abstract: As an organization, Model United Nations offers numerous benefits. Students gain a unique understanding of the goals and operations of the United Nations through participating in mock committees with their peers. Not only does this experience educate students about the U.N. and current world issues, but also helps to develop writing, speech, and debate skills.

Title: Morton’s Neurona
Presenter(s): Amanda Reichel
Department: AT
Advisor: Christopher Huot
Abstract: Identify Morton’s Neuroma Signs and Symptoms Special Tests Prevention Observation Treatment Most common Population
29
Title: The FASB and IASB Conceptual Framework Project
Presenter(s): Anna Eckland, Stacy Fire, Julie Jakulbursi, Aliisa Roberts, Lindsey Swenson
Department: ACCCT
Advisor: Joann Segovia
Abstract: We will discuss updates on the IASB and FASB Conceptual Framework Project, its status, and its perceived effect on the accounting profession.

30
Title: Mothers’ Use of Facilitating Techniques Before and After Parent-Child Communication Program Training
Presenter(s): Margaret Mork, Jessica Rassier
Department: SLHS
Advisor: Louis DeMaio
Abstract: The purpose of our study was to determine if the use of facilitating techniques increased in mothers’ interactions with their children after Parent Child Communication Program (PCCP) training. This study consisted of mothers being videotaped interacting with their child for approximately 15 minutes before and after PCCP training. The first taped interaction, the mothers received a 50-page illustrated instruction manual and they viewed a demonstration video describing PCCP components and techniques. Mothers were then instructed in two separate sessions followed by demonstration and practice sessions. Another 15-minute another-child interaction was videotaped after sufficient training and practice to ensure that the mothers were comfortable with the program. After reviewing the data, we found that there was a significant difference in mothers’ use of facilitating techniques before and after PCCP training. All of our research revealed that parent language training programs can be very effective in aiding in the development of their child’s speech and language skills. Our results showed that PCCP training increased the facilitating techniques of feedback, input, and revision and all of the mothers successfully reached the program goals proving its effectiveness.

31
Title: Wage Differentials for Immigrant Women in the United States: Effect of Gender and Ethnicity
Presenter(s): Abdoulahi Mohamed
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: The United States is one of the few countries in which the numbers of immigrant women may outnumber their male counterparts from increasingly diverse regions with different skills to the U.S. labor force, but does gender and ethnicity affect their economic performance? An area which is understudied and aimed at providing insight into this formerly neglected dimension of immigrant women. Paying particular attention to earning inequality, created by gender and ethnicity. OLS regressions are used to carry out the analysis. A random sample of 4,600 immigrants and 2,000 natives is drawn from a 2005 IPUMS data set. Their wages and salary is used as dependent variable accounting for differences in human capital, gender, natality, education and interactions between gender and ethnicity, the outcome of their gender and place of birth. Gender and ethnicity are found to be significant determinants of wages.

32
Title: Preventing Genocide in Our Time
Presenter(s): Troy Olson
Department: POL
Advisor: Andrew Conteh
Abstract: An analysis of the issues dealing with the prevention of genocide in the world, breaking issues in the prevention of genocide into two categories; short term solutions and long term solutions to the crime of genocide. The short term solutions are characterized as issues dealing with genocide that have modern day solutions that can be reached either presently or in the near-future. The more complex long term solutions are categorized that way because of their difficulty in implementing and realizing for a variety of reasons that will be discussed in this analysis. The conclusions arrived at based on the research is that thus far; the international community has been reacting to genocide instead of being proactive and preventing imminent genocides from occurring.

33
Title: Host plant ovipositional preference of Trichoplusia ni moths for wild and commercial varieties of cabbage with varying levels of glucosinolates
Presenter(s): Brandon Kowalski
Department: SIOL
Advisor: Meena Balgopal
Abstract: Plants in the family Brassicaceae produce a broad array of defensive compounds called glucosinolates. It is broadly accepted that plants evolve higher glucosinolate levels as a means of pest resistance. In this study we worked with varieties of B. oleracea (cabbage) for which the glucosinolate profiles varied. A pair-wise comparison was conducted to observe the female cabbage looper (T. ni) host preference for oviposition to the various levels of glucosinolates. The differing ovipositional behaviors will be presented along with the implications for understanding host plant-herbivore interactions.

34
Title: Women on the Plains: Identity and Role Development in Leadership
Presenter(s): Lindsay Bergenheier
Department: SOC
Advisor: Lee Vigilant
Abstract: This original qualitative research examines the narratives of women leaders living in the F-M area. This study finds that, for these women, the work they do is an integral part of how they form a sense of identity. The roles they hold as leaders are interwoven within their identities as women. The need to balance their schedules and find time to finish everything they want to accomplish is a crucial part of their experience as leaders. The role of spousal participation is also examined.

35
Title: The Potential Impact of a Mass Transit System on Congestion Costs
Presenter(s): Nathan Och
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: This is a study of the effects a mass transit system would have on a densely populated area. It will go through the problem our nation has with traffic congestion and how our cities may or may not be trying to counter this problem, plus I will take a look at Europe and some of the mass transit systems the cities have installed into their infrastructure. This study will include an econometric look at how a mass transit system would benefit the citizens financially, through their daily commute, and the economic impact of having such a system. I will also evaluate the impact of a mass transit system on other markets directly affected by its existence. The goal of this study is to illustrate that the need for a mass transit system, or an improved mass transit system, isn’t just for the rest of the world, but Americans can benefit from what a mass transit has to offer.

36
Title: Human Rights and the United Nation: A Wolf in Sheep’s Clothing
Presenter(s): Bryce Peak
Department: POL
Advisor: Andrew Conteh
Abstract: Historically, the United Nations as a multi-national organization has done a great deal to further the advancement of human rights in all parts of the world. But, instances do exist where the rights of individual groups have been disregarded, infringed upon, or blatantly violated by various sub-organizations or committees within the United Nations structure. From a philosophical viewpoint, it is difficult to accept that the United Nations as a whole has adopted the maxim to promote and protect universal human rights while various aspects of that organization initiate actions which are contradictory to its propagated intentions. This essay attempts to highlight the periodic inadequacy of the United Nations with regards to its primary function as a promoter and protector of universal human rights. In doing so, this essay strives to demonstrate that the United Nations, much like the individual sovereign states which comprise it, is susceptible to the same negative influences and shortcomings that can inhibit the realization and steadfast application of a global standard for the promotion and protection of human rights.
Title: Factors Contributing to Smoking Ban in Public Places and the Impacts of Implementing such a Policy.

Presenter(s): Abdulrahman Abdullahi, Barsha Hamal
Department: SOC
Advisor: Deborah White

Abstract: Tobacco has been a lucrative business since its discovery in ancient Americas by the Europeans; from then on, it has grown into a billion dollar business. The tobacco industry had a cultural norm in most societies until the announcement by the U.S. Surgeon General associating tobacco smoke to lung cancer and other health complications in 1964. Tobacco use is one of the leading public health problems facing the world as it enters the twenty-first century. It is the chief preventable cause of premature death in the United States and has posed itself as one of the biggest threats to the current and future health problem in the world. The main reason behind banning cigarette smoking in public places is to encourage no-smoking policy in community areas. Factors such as public attitudes toward smoking, economic issues, and health issues significantly contribute to the smoking ban in public areas. In our presentation, we will be looking at these factors. There are both positive and negative consequences associated with implementing smoking ban. We will also be talking about the consequences related. Our research for the presentation will be based on literature review of recently published scholarly journals on the subject. Besides talking about factors contributing to smoking ban and impacts of the policy, we will also be talking about some of the limitations we came across while conducting the literature review and also, we will be identifying areas for future research on the subject that we think would be effective.

38

Title: Unification of the Korean Peninsula

Presenter(s): Jon-Erik Virmaa
Department: KMTG
Advisor: Andrew Conteh

Abstract: The two Koreas have been divided for over fifty years and have been in a state of declared war for much of that time. Reunification has been a dream for all Koreans since the Korean War of 1950-53. The Juche ideology in the North has embedded an isolationist and fiercely independent mindset in the leadership of Pyongyang that has been the primary obstacle to reunification even in the face of economic and social collapse. Although there has been recent progress towards reunification with both sides appearing together during the Olympics and a recent summit in 2007 between the two Korean leaders allowing for a joint railroad service, commercial fishing zone, and industrial complex, the ideology of the North is still the nagging factor in reunification talks. Weakening the influence of the Juche ideology over the North Korean regime is key to moving the reunification process forward.

39

Title: Manitoba International Marketing Competition 2008

Presenter(s): Tyler Ebnet, Andrew Scherr, Daniel Schoenecker
Department: KMTG
Advisor: Ruth Lumb

Abstract: We would like to display a poster board from our experience with the 2008 Manitoba International Marketing Competition.

41

Title: The Policy of Same-Sex Marriage

Presenter(s): Joleen Billman
Department: POL
Advisor: Barbara Headrick

Abstract: While same-sex marriage is a controversial topic it does not differ from any other public policy issue. The policy of gay marriage has the same irrefutable characteristics, such as: its policy originates from conflicting views, has multiple players, who represent the contradictory sides of the issue, a reason as to why it is being debated, and the policy’s standing and its prospects for the future.

42

Title: Anishinaabe Ethnobotany Part One

Presenter(s): Kathleen Braton, Katherine Braun, Andrew Bushaw, Errol Geniusz, Bidya Gurung, Elizabeth Jepson, Autumn Klever, Cassie Kramer, Rhonda Olson, Cory Stessen, Stacey Triebold, Margaret Wheelden, Matthew Zupke
Department: AMCS
Advisor: Wendy Geniusz

Abstract: This is an exhibit of the final projects of the students of the Anishinaabe Ethnobotany class, AMCS 390. It will show examples and offer explanations of the many uses that the Anishinaabe, the Ojibwe or Chippewa, the Potawatomi and the Ottawa, Indians have and had for the plants. The displays will explore the plants that Anishinaabe use for food, clothing, housing, crafts with which they enriched their homes and their lives, as well as medicines for both bodily ills and spiritual medicines to connect the people with Spirit. The students will exhibit crafts, medicines, and foods that they have made from indigenous plants.

43

Title: Implementation of the 5E Model of Education on a Genetics Unit

Presenter(s): Amanda Aarahl, Kent Williams
Department: BIOL
Advisor: Richard Lahti

Abstract: We will be presenting two lessons from a unit on genetics using the 5E model of teaching. Using simulations, we will explore Mendelian genetics and how meiosis and mitosis play a vital role in this process. In doing this, we hope to show how the 5E model can be improved by using simulations.

44

Title: Decorated Ceramics from the Biesterfeldt Site: A Stylistic Analysis

Presenter(s): Meredith Morgan
Department: ANTH
Advisor: George Holley

Abstract: I am conducting a stylistic analysis of decorated pottery sherds from the Biesterfeldt Site, an archaeological site in southeast North Dakota. My main goal is to identify a stylistic template for this material. Through comparison with ceramics from other sites, I will trace the evolution of design motifs and explain the cultural significance implied by the similarities and differences. This analysis will show how the Biesterfeldt incised ceramics fit developmentally with other Plains sites and will allow me to place this important yet poorly understood aspect of the Biesterfeldt Site into our conceptualization of the archaeology of the Plains.

45

Title: The Importance of Volunteering in the Lives of the Elderly

Presenter(s): Sarah Osborne
Department: SOC
Advisor: Susan Humphers-Ginther

Abstract: This presentation will bring attention to the importance of volunteering with the elderly, the rewards that result from the experience, and gaining a better understanding of the growing elderly population.

46

Title: The True Value of the Dollar Menu

Presenter(s): Daniel Schoenecker
Department: ECON
Advisor: Oscar Flores-Ibarra

Abstract: This presentation explains how the time-cost of food has decreased over the years, especially within a specific sector of the food industry (i.e. the fast food industry) and how it relates to the growing concern of obesity within America. Due to significant changes that have occurred over the years, people are relying on these low time-cost food choices, which in turn has had a negative affect on their health. It will also be revealed that due to fast food marketing tactics, certain demographic groups (i.e. African Americans and Hispanic Americans) and low income families, have been the targets for a majority of the obesity dilemma. Furthermore with our increasing reliance on the fast food industry, antagonism among competing fast food franchises have led to increases in food portion sizing and the introduction of the “dollar menu” which has escalated the obesity crisis.
47
Title: XBRL and its Effects on the Accounting Profession
Presenter(s): Trevor Nelson, Eric Titze, Russ Whitmore
Department: ACCT
Advisor: Joann Segovia
Abstract: eXtensible Business Reporting Language (XBRL) is an up and coming way for accountants to more easily and effectively create and interpret financial information. We believe XBRL will completely change the way we do things and other new accountants will report, share, and analyze financial data. There are many areas of accounting that may be affected by XBRL, including filing with the SEC, auditing, and international accounting. We will discuss the SEC’s XBRL voluntary filing program, the effects of XBRL on auditing, as well as international and other areas of accounting.

48
Title: Research in Contemporary Art and Design: Self-Portraiture in Contemporary Photography
Presenter(s): Jeffrey Opp
Department: ART
Advisor: Anna Arnar
Abstract: I plan to investigate the self portrait in contemporary photography by studying the work of Elnor Curucci, Arno Raphael Minkkinen, Walead Beshry, and Antony Goicolea. Each of the four photographers uses the self portrait as a subject in a large part of their work. I aim to find out why the self image frames their work. My presentation will ask whether the work is autobiographical in nature. If not, who does the self portrait represent? Are these works narcissistic in origin? Are they drawing basic human connections by using themselves as a stand in for another human being? Is it a vehicle to project or extend new identities?

49
Title: Effects of relatedness and the risk of competition on clutch size decisions in a parasitic wasp
Presenter(s): Kyle Noyes
Department: BIOL
Advisor: Meena Balgopal
Abstract: Kin selection theory suggests that individual organisms will display more altruistic behavior towards relatives to indirectly increase their fitness, and more competitive behavior towards non-relatives. In this experiment the clutch size decisions of the ectoparasitoid wasp, Habrobracon hebetor, on its host, the common Indian meal moth, Plodia interpunctella, larvae were examined to determine how clutch size, and sex ratio are affected by the pre-ovipositional experience to relatives, non-relatives, and solitary life. We will discuss how total clutch size, overall sex ratio, and primary sex ratio differ among the three treatment groups. Female body size, a fitness correlate, will also be presented.

50
Title: Synthesis of semicarbazide-cyanoborane in inorganic liquids
Presenter(s): Amber Goraczkowski
Department: CHEM
Advisor: Gary Edvenson
Abstract: The reaction of sodium cyanoborohydride and semicarbazide hydrochloride in inorganic liquids has been studied. The extent of reaction and the ability to isolate the semicarbazide-cyanoborane product will be compared to when the reaction is carried out in THF. Characterization will be done by boron-11 and proton NMR spectroscopy.

51
Title: Anishinaabe Ethnobotany Part Two
Presenter(s): Ashley Dale, Julie Dale, Meri Dalakyan, Renee Posmark, Loudes Garcia, Mychel Lynn, Merideth Morgan, Alonso Rangel, Ellie Rangel, Jennifer Schmidt, Kayla Serie
Department: AMCS
Advisor: Wendy Geniusz
Abstract: This is an exhibit of the final projects of the students of the Anishinaabe Ethnobotany class, AMCS 390. It will show examples and offer explanations of the many uses that the Anishinaabe, the Ojibwe or Chippewa, the Potawatomi and the Ottawa, Indians have and had for the plants. The displays will explore the plants that Anishinaabe use for food, clothing, housing, crafts with which they enriched their homes and their lives, as well as medicines for both bodily ills and spiritual medicines to connect the people with Spirit. The students will exhibit crafts, medicines, and foods that they have made from indigenous plants.

52
Title: Identity Theft
Presenter(s): Megan Aldinger
Department: ACCT
Advisor: James Hansen
Abstract: Do you feel safe living in North Dakota? What if I were to tell you that three North Dakota cities were named as three of the top ten cities of the United States targeted by a certain crime. In fact, one out of every twenty three people will be affected by this crime. What is this crime? Identity Theft. In this presentation I will cover ways identity thieves get your personal information, how to minimize your risk, and also what to do if you find yourself a victim of identity theft.

53
Title: The Racist Side of Humor
Presenter(s): Jessica Schrader
Department: ENGL
Advisor: Hazel Reitlau
Abstract: How does our culture view racism? Episodes from a popular adult cartoon, Drawn Together, make a point to call out racism by making jokes about it. The problem is that the jokes seem to fuel racism, rather than combat it. Especially in some of the “graphic” scenes referring to slavery, the material seems included for shock value, and little else. The argument exists that humor can make a complicated issue more comfortable to think about, and easier to dismiss — but what happens when no one laughs? Do shows like Drawn Together indicate that our culture is content to accept racism and offensive material so long as it’s humorous?

54
Title: Utilizing the 5E Model to teach two lessons in human physiology
Presenter(s): Megan Zadach, Todd Zieliinski
Department: BIOL
Advisor: Richard Lahti
Abstract: Education is a vast field. To become an educator, one must decide what tools and resources are the most effective. An excellent model that can be used is the 5E Model. It can be molded to fit all content areas and a wide range of subjects. Engagement-Exploration-Explanation-Elaboration-Evaluation are the five components. This talk will use the 5E Model to integrate inquiry into lessons on human physiology and how it relates to homeostasis. Because free inquiry can be unpredictable in the classroom, computer simulations will be incorporated into the lesson to direct thought and construct a framework of knowledge. This allows the teacher to either build upon this framework with further knowledge, reinforce it with other ideas and concepts, or break it down completely and restructure it to reach the right conclusion.

55
Title: Nurses in America
Presenter(s): Kimberly Ness
Department: HLTH
Advisor: Merle Johnson
Abstract: Since there is such a shortage of Nurses in the United States today, I will be presenting on the different types of Nurses and what they do. It will help people to better understand the different nurses and why there is such a high demand for their help.

56
Title: Research in Contemporary Art and Design: Contemporary Practices in Drawing and Printmaking
Presenter(s): Aliasse Andersen
Department: ART
Advisor: Anna Arnar
Abstract: My presentation for the 2008 Student Academic Conference will investigate the fusion of traditional art techniques and media with contemporary imagery in drawings and prints from 1975 to the present. I will give a brief overview of the history of several printmaking techniques such as mezzotint, etching, and lithography, and describe how recent artists have modified these traditional techniques to suit post-modern imagery. I will also explore how artists working with conventional drawing mediums such as pastel, charcoal, graphite, and watercolor have adopted traditional techniques to communicate contemporary themes.
58
Title: Research in Contemporary Art and Design: The Design Philosophy of Philippe Starck
Presenter(s): Kristen Stalboecker
Department: ART
Advisor: Anna Arnar
Abstract: French designer Philippe Starck creates products that have strong concepts. In my paper I want to explore his ideas and philosophies of design. Product design, interior design and architecture are the three main areas that I intended to investigate in my presentation. In particular, I will analyze his “Good Goods” line which reflects his ideas on non-products for the “non-consumers”.

59
Title: Research in Contemporary Art and Design: The Use of New Media in the Art of Guo-Qiang
Presenter(s): Stephanie Thomas
Department: ART
Advisor: Anna Arnar
Abstract: In this presentation, I plan to discuss common questions on the basis of contemporary art and design through the work of Chinese born artist, Cai Guo-Qiang. I will discuss the use of new media in Guo-Qiang’s work, including gunpowder and explosives in relation to the confines of traditional classifications of art. In addition, I will discuss the use of symbols and narratives within his work and how this practice may open the door for many other new media in art.

60
Title: Construction Management Capstone project
Presenter(s): Luke Jost, Shane Walton
Department: CM
Advisor: Norma Andersen
Abstract: We will be presenting our senior Capstone project on the re-development of the Moorhead city powerplant.

61
Title: Research in Contemporary Art and Design: Loren Greenfield’s Girl Culture and the Role of Consumer Products in Shaping Women’s Self-image
Presenter(s): Adonia Daigle
Department: ART
Advisor: Anna Arnar
Abstract: My topic of interest is Lauren Greenfield’s photography, in particular I will examine her book Girl Culture, that addresses the body image of young girls and women. Some of the areas that I would like to pay special attention to is how consumer products made so many women feel they need to look a certain way? Another question I would like to investigate is the role that toys play in shaping a young girl’s self-image. How can we learn from this kind of investigation and suggest ways to generate and products that are more empowering?

62
Title: The U.S. ‘s fight against HIV/AIDS, a mathematical model
Presenter(s): Eric Eager, Alfred Ndungu, Julie Vancura
Department: MATH
Advisor: Ellen Hill
Abstract: Crime is an important aspect in choosing a place to live and work. We will construct a mathematical model of the future behavior of crime in the states of North Dakota, South Dakota and Minnesota. We hope that this time series model will allow for a more thorough evaluation of the various places people live.

63
Title: Heinrich Schliemann: Representative of the 19th Century
Presenter(s): Kristin Thompson
Department: HIST
Advisor: Margaret Sankey
Abstract: file:///G:/Heinrich%20Schliemann.doc

64
Title: Tax Fraud: An Analysis on the Effects of Noncompliance within Society
Presenter(s): Julie Jacobson
Department: ACCT
Advisor: James Hansen
Abstract: Breaking news: $300 billion stolen from the U.S. government! Surprised that you didn’t see this headline back in 2001? What happened? Two words: tax fraud. In this presentation, I will address the consequences of tax fraud, what types of individuals are responsible for the fraudulent activity, and what is being done to bridge the gap between what should and what is being collected.

65
Title: Celiac Sprue
Presenter(s): Megan Schlichting
Department: AT
Advisor: Christopher Huot
Abstract: An overview of celiac sprue, how it affects the body and lifestyle of people who are suffering from the disease.

66
Title: Developing Intercommunity Workshops: Process and Collaboration
Presenter(s): Tarver Mathison, Anna Musselman
Department: ENGL
Advisor: Thomas Tammaro
Abstract: There is untapped opportunity for interaction between colleges and high schools in the Fargo-Moorhead area. This presentation will explain the purpose and process of creating an intercommunity workshop, using the writer’s workshop developed by MSUM’s Sigma Tau Delta, English Honors Society, as an example. The determination and adaptability necessary to complete the project will be emphasized, and we will discuss how projects like these will benefit the larger F-M community.

67
Title: XBRL - Extensible Business Reporting Language
Presenter(s): Dipesh Karaki, Danielle Mathiason, Jennifer Stangel
Department: ACCT
Advisor: Joanna Segovia
Abstract: XBRL - Extensible Business Reporting Language

68
Title: SEC Advisory Committee on Improvements to Financial Reporting
Presenter(s): Samantha Desrosier, Kevin Kragnes, Heather Leyendecker, FeMarie Miske, Sara Tofte
Department: ACCT
Advisor: Joanna Segovia
Abstract: Information about improvements and progress the SEC Advisory Committee for Improvements on Financial Reporting has contributed the business world and people that are interested in the stock market.

69
Title: Searching for Cryptic Species: Assessment of Genetic Variation Among Marchantia inflexa Populations Using Inters-Sequence Simple Repeats
Presenter(s): Andrew Ross
Department: BIOL
Advisor: Linda Fuselier
Abstract: Quantification of biodiversity is of primary importance in the face of the large number of extinctions occurring globally. Nonvascular plants are understudied and human impact on their biodiversity is not well understood. Accurate quantification of biodiversity of plants is dependent upon genetically distinguishing among taxa that may be quite similar morphologically. Our study focused on a thalloid liverwort, Marchantia inflexa that ranges from South America to the southern United States. Marchantia inflexa exhibits two growth forms that are retained when plants are grown in a common garden. Further, populations in Florida and Oklahoma are more similar to one another than to all other populations in the species’ range. The existence of clustered, different, growth forms begs the question “does M. inflexa harbor cryptic species?” Our research goals were to assess genetic variation within and among Marchantia inflexa populations to determine if the species harbors cryptic species, and to assess the degree to which genetic differences correlate with growth forms observed in
previous experiments and follow predicted patterns of population divergence. We used inter-sequence simple repeats (ISSR's) to genotype M. inflexa from four populations in the Southern United States. ISSR's bind to simple repeats on the plants genome, allowing the variable areas between them to be copied in a standard PCR process. Two primers were sufficient to genotype individual plants. Although we are still collecting data on genotypes, we will use analyses of molecular variance to assess genetic differences among populations and F-statistics to quantify the degree of population substructuring. We expect M. inflexa to harbor cryptic species and plan to use the genetic fingerprints obtained in this study in an assessment of phylogenetic divergence among populations.

70
Title: Jalapa, Nicaragua: A Transcultural Experience
Presenter(s): Stephanie Kritzberger
Department: NURS
Advisor: Jane Bergland
Abstract: This poster will provide a description of Campinha-Bacote's Transcultural Theory and how it was applied to our mission trip to Jalapa, Nicaragua.

71
Title: What has been done to end the conflict in Darfur?
Presenter(s): Mikan Lovick
Department: POL
Advisor: Andrew Conteh
Abstract: The goal of this presentation is to answer the following questions: What is the conflict in Darfur? What has been done to solve this conflict? What preventative measures can be taken to avoid a similar conflict? I will address some of the reasons why the conflict began and what has transpired in the mean time. I will focus on the efforts of the United Nations, the African Union, the United States and the hybrid UN and AU mission in Darfur. The paper concludes by turning the attention to conflict prevention. We will look at different mechanisms that can be taken advantage of by the international community in preventing a future Darfur.

72
Title: Levels of Love Components in Relationships Based on Sternberg's Triangular Theory of Love
Presenter(s): Brianna Johnston
Department: PSY
Advisor: Ernest Halford
Abstract: This study is concerned with the study of partner relationships based on Robert Sternberg's Triangular Theory of Love. Undergraduate participants, who were currently involved in relationships, completed a modified version of Sternberg's Love Scale and ratings were compared to their relationship stage. Main effects were not significant, however, interactions between relationship status and love components were found to be showing that relationship category has an effect on component ratings.

73
Title: Conservative Treatment of Disc Herniations
Presenter(s): Lindsay Crabtree
Department: AT
Advisor: Dawn Hammerschmidt
Abstract: Disc herniations, sometimes referred to as “bulged discs” are often difficult to treat, due to the cause and effect of the mechanism of injury. A differentiation of acute vs. chronic must be made along with the diagnosis, and the mechanism of injury must be scrutinized to develop an effective treatment plan. Although surgery for disc herniations has developed and become less invasive over time, there are always risks associated with the procedures. Conservative treatment by means of therapeutic modalities, rehabilitation, reconditioning, and lifestyle modifications are safer and can prevent future reoccurrences.

74
Title: Research in Contemporary Art and Design: Protest Art of the Vietnam War Era and Today
Presenter(s): Jessica Hoffman
Department: ART
Advisor: Anna An
Abstract: For my presentation, I would like to compare and contrast the protest art of the Vietnam War to that of the current post-9/11 era. I will pose the following questions: Was there more of a political and artistic movement in the early 1970s? Has the advance of technology caused people to be more isolated, leading the idea of a group effort (protests, events, collaboration, etc.) to be lost? Have the themes of war, dissent and peace changed in any way over the past few decades, or are artists finding new ways to express these views?

77
Title: Solar Energy
Presenter(s): Cole Jensen
Department: PHYS
Advisor: Stephen Lindas
Abstract: Increasing clean energy is becoming more of a concern as global warming increases and fossil fuels diminish. Many people are looking to alternative methods of energy. Passive and active solar are the techniques we use to collect the energy of the sun. Passive energy is typically created by the positioning of windows and glass to heat water or other substances. Active solar energy is essentially the use of silicon chips to convert sunlight or Ultra Violet light into electricity. This research project is part of an ongoing study of camparing active vs. passive energy. With the same footprint can you harvest more energy with active or passive solar cells. The focus of this presentation would be the effects of normal weather conditions and angles of solar panels on the energy produced by the sun.
progression for CAB is over time following SCI. If arterial blood pressure is abnormal and unstable following SCI, one mechanism that may be contributing is the arterial baroreflex. It is unknown whether baroreceptor reflex sensitivity or operation set point changes over time following spinal cord injury. The baroreflex acts to keep blood pressure near a homeostatic set point: changes in blood pressure are measured by baroreceptors and change reflexively the autonomic nervous activity to compensate by changing parameters such as heart rate. Alteration of the sensitivity or a chronic shift in the operation point of this reflex may contribute to the overall change in autonomic balance. Altered sympathetic activity increases β-adrenergic receptor activation. β-adrenergic signaling alters Ca2+ homeostasis by regulating expression of Ca2+ regulatory proteins. Previous research has demonstrated SCI rats express changes in the mRNA and protein concentration of the Ca2+ regulatory proteins SERCA, PLB and Na+/Ca2+ exchanger. Therefore the central hypothesis of this project is that spinal cord injury results in an increased sympathetic tonic progressively over time, which in turn alters the expression of Ca2+ regulatory proteins, increasing the susceptibility to arrhythmias. Furthermore, the elevation of sympathetic tonic results from a change in baroreflex sensitivity. Molecular remodeling of Ca2+ regulatory proteins is due to chronic activation of β-adrenergic receptors on the heart. The chronic infusion of β-agonists in spinal cord injured rats will prevent the alteration of Ca2+ regulatory protein expression. To test these hypotheses, male Sprague Dawley rats will undergo dorsal laminectomy and transection between the fourth and fifth segments of the spinal cord or sham transection for control. Animals will then be instrumented with ECG electrodes to measure autonomic balance and radio telemetry catheter to measure blood pressure and heart rate over a five-week time course. Additional spinal cord transected animals will be surgically implanted with a mini osmotic pump to dose metoprolol, a 35mg/kg/day dose of β-blocker, or saline placebo. Changes in Ca2+ regulatory proteins in whole heart homogenate will be determined by protein assay and Western blot.

83 Title: Health Care Reform
Presenter(s): Craig Ehrmantraut
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: A look at problems with the current health care system and possible solutions.

84 Title: Wuthering Heights’ Catherine Earnshaw: Feminist Cautionary Tale or Bronte’s Ideal?
Presenter(s): Kellie Meehauuse
Department: ENGL
Advisor: Katherine Meiners
Abstract: In Gothic literature’s heyday (late eighteenth to early nineteenth centuries), the genre served a greater purpose than simply terrifying its eager readers. Rather, Gothic literature often reflected the current views of society, such as the Anti-Catholicism displayed in most works of the genre, as well as the opinions of a novelist’s author. This social commentary disguised as fiction shows most obviously in the portrayal of Gothic heroines in conjunction with the rise of the women’s rights movement. In particular, The Italian’s Elena Rosai and Northergher Abbey’s Catherine Mooreland symbolize respectively how women are and how they ought to be, mirroring society’s views of women at the time each novel was published. Yet, when compared to the above heroines, Wuthering Heights’ wildly independent and impulsive Catherine Earnshaw represents a heroine desperate to break social restraints at all costs. This essay will examine Emily Bronte’s intentions in creating such an extreme heroine and how this relates to the women’s rights movement in comparison to the above Gothic heroines. Does Catherine Earnshaw’s life serve as a cautionary tale for feminists, urging them not to take independence too far? Or has Bronte created a heroine she believes to be the ideal woman, the one all readers should strive to embody?

85 Title: The Digital Tongue: the Causes and Effects of Netspeak and Internet Slang
Presenter(s): Tarver Mathison
Department: ENGL
Advisor: Thomas Tammaro
Abstract: The ever-increasing use of Internet slang, or Netspeak, has been seen as a detriment to the English language. Yet, few know the reasons this broken tongue has become so popular. Using sociolinguistics as an anchor, this presentation will examine and explain the social and technological forces that have influenced the English language, specifically detailing the origins of Netspeak. This will help detail some theories of what Netspeak is doing to the English language, and will lead to theories as to what is to be expected from Internet slang in the years to come.

86 Title: Aging, Loneliness and Isolation
Presenter(s): Shirley-Nita Emmul
Department: SOC
Advisor: Susan Humphers-Ginther
Abstract: As people age, isolation and loneliness emerge and this fact is a universal concern. Elderly people have been seen to become isolated especially in their late stages of their life and many factors account for that. Some of the factors resulting in elderly isolation include higher life expectancy, women outliving men, elderly people living alone etc. In this presentation, I will address issues such as causes of isolation and loneliness, types of isolation, impact of isolation on the elderly, and lastly some general statistics on the elderly, aging and isolation.

87 Title: The fight against HIV/AIDS
Presenter(s): Kendra Nies, Nicole Novak, Erin Olson
Department: MATH
Advisor: Ellen Hill
Abstract: We will present different ways of using resources available for addressing the HIV/AIDS problem. We will make recommendations of how to distribute these resources.

88 Title: Helping People with Disabilities through Art Therapy
Presenter(s): Macy Schindler
Department: ART
Advisor: Wil Shynkaruk
Abstract: For the last four years, Macy Schindler, has held ceramic workshops for people with disabilities. These workshops provide individuals with a way to enjoy and express themselves as individuals. Art classes benefit people in multiple ways such as: following directions and working in steps. The clay exercises their fine motor skills and unleashes their imagination. The classes include demonstrations, in class projects, but also one on one instructions. The projects are bisque, glazed, and taken home.

89 Title: Research in Contemporary Art and Design: Feminism and Cindy Sherman’s Photography
Presenter(s): Kristien Horning
Department: ART
Advisor: Anna Arnar
Abstract: My presentation will be taking an in depth look at Cindy Sherman’s work. Sherman is an American photographer widely recognized for her investigation of how the images of women circulate in popular culture. I would like to compare these images to the ways in which men are portrayed. I’m hoping the viewers of Sherman’s work will take with them a more advanced understanding of how culture shapes our views about gender.

90 Title: Asymmetric synthesis of novel pyrazolidinone compounds using chiral relay and face shielding
Presenter(s): Michael Caspers
Department: CHEM
Advisor: Craig Jasperse
Abstract: Novel pyrazolidinone products were successfully synthesized upon treatment of unsaturated acids with hydrazine. Controlled time, heat, and vacuum are important for purity and yield of the products. Products have been synthesized in high yield with R1=Ph and R2=H; R1=1-naphthyl and R2=H; R1=2,3,4-trimethoxyphenyl and R2=H; and R1=R2=ethyl. Radiochemical studies show that the top amidate nitrogen has its lone pair locked up in a p-orbital and is less nucleophilic, while the bottom nitrogen is sp3 and more reactive. Acylation proceeds to give products that are promising for diastereoselective reactions (either enolate type reactions for saturated acyl groups, or conjugate additions when the acyl group is unsaturated). Diastereorecontrol involves "chiral relay", in which the permanent stereochemistry at the chiral carbon controls the...
stereochemistry of the bottom nitrogen, such that CH2R3 can provide face shielding for reactions during acylation.

91
Title: Research in Contemporary Art and Design: The Paintings of Gerhard Richter
Presenter(s): David Valdez
Department: ART
Advisor: Anna Armstrong
Abstract: In this presentation, I discuss the importance of famed German painter Gerhard Richter. Richter is considered one of the most important German artists post World War II, as well as one of the most appreciated and collected painters of our time. I will examine what Gerhard Richter's inspirations were in the past, and what they are now. In particular, I will investigate Richter's conscious decision to paint from photographs as opposed to painting from life. The peculiar blurring effect in his work will also be examined. Finally, Richter's views on the status of painting in contemporary culture as well as it's future status will be central to this paper.

92
Title: Frida Kahlo: A Mexican Icon
Presenter(s): Molly Pederson
Department: SPAN
Advisor: Benjamin Smith
Abstract: Frida Kahlo was a Mexican self-expressionist known for her graphic, but intriguing art. Frida lived most of her life in Mexico City and was married to muralist, Diego Rivera. Frida suffered a lot through her life due to a tragic bus accident when she was 18. Her life was never the same after that day. The art of Frida Kahlo represents who she was - a strong woman. Frida put all of her emotions on canvas. Her paintings depict her everyday struggles and pain. Frida's art is a reminder to us that everyone has the ability to overcome life's obstacles. Viva Frida!

93
Title: Indigenous Peoples' Rights and The Right to Self-Determination
Presenter(s): William Rohla
Department: POL
Advisor: Andrew Count
Abstract: Indigenous peoples have long been persecuted and overlooked. From the days of European colonization to the modern times of corporations and IGOs, indigenous peoples have long wanted the right to self-determination. In this paper I examine why indigenous peoples have and need the fundamental right to self-determination and to have the responsibility for their own destiny. This paper reviews the many different resolutions, declarations, and seminars that have been proposed and voted on in the United Nations in attempts to further advance the cause of indigenous peoples. The paper also looks at examples of indigenous groups in Latin America and how they have used grassroots methods in order to create indigenous organizations to become a player in national policy. Indigenous peoples have the fundamental right to self-governance and personal and collective liberty through examples like the ones in Latin America and advancements by individual nation-states and the U.N., indigenous peoples groups can further advance their cause and their rights. I plan to do a powerpoint presentation to better outline the points and conclusion made in my paper and in my abstract. Thank you.

94
Title: Atomic Force Microscope To Measure Nanoscale Distances
Presenter(s): Fennor Colson
Department: PHYS
Advisor: Linda Winkler
Abstract: The Nanosurf easyScan2 AFM is an atomic force microscope system that uses a laser and a position sensitive device to detect the molecular topology of a surface. With this system the distances between distinguishing features on integrated circuits will be measured, as well as the diameter of nanotubes. With the knowledge of companies' design of electrical components, the distances measured can reveal which company built which component. We will present our distances measured and which company built which circuit.

95
Title: The Road through The Lord of The Rings
Presenter(s): Michael Flickinger
Department: ENGL
Advisor: Stephen Harnick
Abstract: This paper examines the symbol of "The Road" and its function in the mythology of J.R.R. Tolkien. Analysis focuses upon walking songs found in The Hobbit and The Lord of The Rings and their ideological subtexts.

96
Title: Returning to Toy Guns: A Child Soldier after the Conflict Is Over
Presenter(s): Meghan Powers
Department: POL
Advisor: Andrew Cont
Abstract: Child soldiering has quickly become a topic of great concern in the United Nation's General Assembly and other organizations across the globe. The recruitment and active participation in armed conflict of children under eighteen is a violation of children's rights and is not only scarring the children, but also scarring society as a whole. This paper seeks to evaluate the strategies put into place for the child soldier once he/she returns home post-conflict. It is hypothesized that these programs do not sufficiently provide support for the child soldier and this paper seeks to address ways in which child support can be achieved. It is crucial to gain a greater understanding of ways to improve the life of a child after the armed conflict is over.

97
Title: Contemporary Hispanic-American Playwrights
Presenter(s): Roxanne Berg
Department: SPAN
Advisor: Mary Thord
Abstract: The American theatre, like our nation, has been enriched by the diversity of Hispanic cultures. This discussion will introduce several contemporary Hispanic-American playwrights and will focus on the subjects, themes, styles, and cultural connections of their works.

98
Title: Romanticism and Death: A paralleled world
Presenter(s): Marie Lee
Department: MUS
Advisor: Laurie Blumson
Abstract: Romanticism and Death: A paralleled world By Marie A. Lee. The romantic period within western history is considered to be one of the great turning points in how we, as people deal with death and dying. Several comparable proportions are made within the musical and living world. During this period (1825-1900), composers used a wider range of emotional expression, leading to a greater partisanship than is previous era (the Classical period) or stages prior or following it. The idea of Romanticism was soaring in this age, and ideas of faith, emotion and fantasy were prevalent. It is very interesting to see how the western world changed within the Romantic Period of history, especially in the presence or absence of death and dying. People at this time believed and deliberated on many different social, philosophical, and emotional notions of death. It is quite fascinating how they resembled the customs and beliefs of death and corresponded them to the musical techniques. Composers including Schubert, Schumann, Wagner, Chopin, and Tchaikovsky were predecessors in this era, corresponding music to the beliefs of Romanticism. I chose this topic as a means of studying my own association in death. After graduating from MSUM, I plan to enter in a field of mortuary science as a funeral director. Throughout learning and revising several Romantic Era books, musical works, and composers, I studied the concepts and philosophies of death and dying. I found several relationships in the musical world and bereavement. These findings meant that the Romantic Period was a time in which people were fascinated with the idea of death; their everyday lives were revealed as a passion and obsession with it. Through this project, readers and listeners will be able to incorporate how this obsession drastically changed the musical world and the livelihood of generations to come.
Title: Urban Growth Boundaries and Housing Prices
Presenter(s): Eric Bigelow
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: The purpose of this presentation is to study Urban Growth Boundaries and how they affect housing prices in metropolitan areas. Urban Growth Boundaries are land-use regulations which attempt to control how cities may be zoned. Using a number of different variables, I will show how urban growth boundaries affect housing prices in cities with boundaries and cities without.

Title: The Biesterfeldt Site: A National Historic Landmark
Presenter(s): Kathryn Maxwell
Department: ANTH
Advisor: Rinita Dahan
Abstract: The Biesterfeldt site, located in southeastern North Dakota, is a Chippewa village occupied early in the eighteenth century. It is of national significance because it provides data on the migration of peoples in the Great Plains. This site also captures a shift from living in settled villages to becoming nomadic bison hunters. The National Park Service, Midwest Archaeological Center and Minnesota State University Moorhead are conducting a comprehensive study on the Biesterfeldt archaeological site to nominate it for National Historic Landmark status. Valuable historical data available includes maps, air photos, historical accounts as well as artifact stories in various locations. The purpose of my research is to compile a database of the various sources, obtain and make copies of data we do not have, and integrate the records of four faculty members. This project is a practical application of the curatorial aspects of archeology.

Title: Fuel Efficiency: What's in Your Tank?
Presenter(s): Katie Larson
Department: MATH
Advisor: Ellen Hill
Abstract: For our group presentation we are going to study fuel efficiency. The proposition is even though super unleaded fuel is more expensive, is it worth using in the long run? How about a new car that takes E85, is the extra money for the new car worth the amount saved in gas? What does the future of E85 look like? Could it become the same price as regular gasoline? To complete this project we will find statistics on fuel efficiency on a variety of cars (Ford Taurus, Honda Civic, Buick LeSabre, Chevy Malibu and Chevy Blazer) and calculate if using super unleaded gasoline will save money in 5 years, 7 years, and 10 years. We will also calculate fuel efficiency on a new car that takes E85 and calculate if money will be saved in 5 years, 7 years, and 10 years. We will also need to take into account the inflation of gas prices. For each of these we will need to find statistics on these cars and average them, or simply find an average directly from the company. Fuel inflation prices may be hard to find or work with, so we may need to do the project in the assumption that the price spread among super unleaded, unleaded and E85 will generally stay the same, no matter the inflation.

Title: US Coal Supply: a Mathematical Projection of Coal Reserves and Why We Need to Search for an Alternative Resource
Presenter(s): Monear Al-Rifai, Michelle Hinz
Department: MATH
Advisor: Ellen Hill
Abstract: This project will examine one of the major energy resources in the United States. Coal. According to the Department of Energy, coal generated 49.7% of the electricity produced in 2005. While the ratio of coal to other fuel sources might not change very much in the coming few years, the amount of coal needed will definitely increase, due to the ever-increasing production of electricity that accounts for about 75% of coal consumption.

Although some estimate that the United States has enough coal to last for at least another 200 years, these estimates might be questionable. Using official data for coal production and coal reserves as provided by the Energy Information Administration, we will try to project the expected lifetime of coal reserves. This will take into consideration the increasing demand for electricity, the increasing population that results in more demand for coal, as well as other trends that are depleting our coal reserves at a high rate. The project will also touch on the need to switch to a better fuel source that is cost-efficient and environmentally friendly. In spite of the fact that coal-generated electricity is seemingly cheap, the production of coal could have a high cost in the long run when other factors are considered.

Title: Recovery following UVR exposure in Marchantia polymorpha, M. paleacea, and M. inflexa
Presenter(s): Jenny Neuberger
Department: BIOL
Advisor: Linda Fuselier
Abstract: The stratospheric ozone layer is slowly being depleted, thus more ultraviolet radiation (UVR) is able to reach the earth’s surface. This is a concern because UVR can cause alterations in DNA, photosynthesis, growth, development, and an increase in UV-screening compounds in plants. Liverworts are small plants that live along streams. Population persistence is dependent upon asexual reproduction via production of gemmae, small propagules dispersed by water droplets. I will investigate long-term impacts of UVR on liverwort gemmae from three species: Marchantia inflexa, M. paleacea, and M. polymorpha. Gemmae will be exposed to UVR levels higher than ambient and measured every 10 days after exposure to determine whether gemmae can recover from exposure. It is expected that the exposed UVR gemmae will recover to the same measurements as the non-exposed UVR gemmae. It is also expected that M. polymorpha will be able to recover the fastest out of the three species while M. paleacea will recover the slowest. Results from this study will have important implications for understandings of climate change on plant populations.

Title: TEEM Construction, Inc.
Presenter(s): Erin Eagleson, Tina Miller
Department: CM
Advisor: Norma Andersen
Abstract: Renovation of Moorhead Power Plant into a updated Moorhead Public Library

Title: H&B Construction Group Presentation
Presenter(s): Christopher Sazama
Department: CM
Advisor: Norma Andersen
Abstract: Group Presentation

Title: Examining the effects of caffeine on oxidative stress, beta-amyloid production, and mtDNA damage in laboratory mice
Presenter(s): Jeffrey Corrow, Christopher Failing
Department: BIOL
Advisor: Ellen Brisch
Abstract: Previous reports have determined that caffeine reduces brain beta-amyloid (A?) production and cognitive impairment in Alzheimer’s transgenic mice. Alzheimer’s (AD) is a neurodegenerative disease resulting in progressive cognitive impairment and elevated levels of A? protein. Extensive evidence has shown that A? formation creates amyloid plaques which may have a link to oxidative stress. A? can increase oxidative stress by lipid peroxidation, DNA and protein oxidation, and can directly cause mitochondrial abnormalities. Oxidative damage to mitochondrial DNA can have severe consequences on the cell. It is generally accepted that A? production is a trigger for the early onset of AD. Studies have demonstrated the affects of caffeine on AD by treating AD transgenic mice with caffetimealted water and analyzing their cognitive abilities and hippocampus A? levels. Specifically, caffeine decreased hippocampus levels of A? and the expression of 7-secretase (BACE) and Presenilin 1 (PS1), both involved in the activation of the A? protein. To date, no one has determined the effects of caffeine on oxidative stress.

Therefore, we want to determine if caffeine is a factor in reducing oxidative stress in the mitochondria. In this study mice will be given caffeine treated water at concentrations of 0.3mg/ml, 0.6mg/ml, 0.9mg/ml, 2.0mg/ml, and 4.0mg/ml respectively. Brain tissue samples will be obtained to measure beta-amyloid protein levels, degradation of mtDNA, and production of reactive oxygen species (ROS). We hypothesize that the dosage of caffeine at 0.6mg/ml will reduce oxidative stress the most and that dosages higher than 0.6mg/ml will be damaging to the cells.
107
Title: An analysis of the international automobile industry
Presenter(s): Robert Haas
Department: ECEN
Advisor: Oscar Flores-Ibarra
Abstract: This presentation contains research that I have conducted involving the international automobile market. My research addresses the history and trends in the international automobile market to gain an insight into the future of this complex industry. All my conclusions are based on economic theory and the application of economic and econometric modeling techniques.

108
Title: The effects of elevated carbon dioxide on growth and reproduction of maternal families of Brassica rapa plants
Presenter(s): Amanda Wickersharm
Department: BIOL
Advisor: Alison Wallace
Abstract: It has been well documented that various species of plants may exhibit differential growth and reproductive responses to elevated carbon dioxide, yet less work has been done on within species responses. The purpose of our study is to attempt to detect any genetically-based causes of intraspecific variation in the growth and reproduction of Brassica rapa plants at ambient and elevated levels of carbon dioxide. Nine replicates of four maternal families were grown from seed at ambient (400 ppm) and at elevated (600 ppm) carbon dioxide in controlled growth chambers. Growth and timing of development measures will be recorded and analyzed by the time of the conference presentation, however, the reproductive output will still be in progress.

109
Title: Research in Contemporary Art and Design: The Feminist Art of Sarah Lucas
Presenter(s): Abbigal Cline
Department: ART
Advisor: Anna Armbr
Abstract: In this presentation I will be researching the British artist Sarah Lucas and her contribution to feminist art. Lucas became a well known artist in the 1990’s. Her art focuses on gender, sexual stereotyping, sex, death and British culture. She uses everyday objects to represent the body in disturbing ways. In this presentation I will discuss Lucas’s attraction to found or everyday objects and how she approaches them safely in her work. I will also investigate how she is abrasive but incorporates humor. Lastly, how her body of work has influenced contemporary feminist art.

110
Title: Financing Long-term Care
Presenter(s): Massa Kiawoin
Department: HLTH
Advisor: Barry Halm
Abstract: The student academic conference presentation will discuss financing alternatives for the provision of Long-term Care in the United States. The Long-term Care industry is facing economic challenges as the demographics of the population shift. This increase is a trend that will continue into the next few decades because of declining fertility rates and an increase in life expectancy. Because of this increase in the elderly population and the constrained reimbursement system, there is a continuing debate over how to fund Long-term Care services. The major sources of Long-term Care financing is Medicaid. A discussion of Medicaid, its limitations, and the impact on those that rely on Medicaid assistance is a component of the presentation. The premise of the presentation is framed around “what can our society do to finance Long-term Care service for those individuals that has less means and great needs?” The presentation will identify the financial struggles faced by those within society that does not have the economic means to access Long-term Care services without significant and limiting hardship.

111
Title: Nathaniel Courthope: The Unsung English Hero Who Created An Empire
Presenter(s): Nicholas Pestel
Department: HIST
Advisor: Margaret Sankey
Abstract: Nathaniel Courthope, a forgotten man in history whose courage and leadership helped the English obtain Manhattan from the Dutch from the result of his death and thus the start of English dominance on the American continent. This presentation would look into the life of Courthope, his expedition to the Spice Islands (now known as Indonesia), the conflicts with the Dutch over the Island of Run, his time on the island and the eventual downfall of the forgotten English hero.

112
Title: Native American Eagle Trappings
Presenter(s): Daniel Salas
Department: ANTH
Advisor: George Holley
Abstract: During the summer of 2007, an MSUM team working at the Peterson site in the Sheyenne River Valley, identified an extant pit, located on the top a bluff overlooking the Sheyenne River Valley, next to where the Peterson site. This was interpreted by a native informant as an Eagle Trapping pit. This discovery inspired me to explore the importance of the phenomenon among Native Americans. I will explain the importance of Eagle Trappings among Native Americans, explain the processes and ceremonies that are linked to Eagle Trappings, and describe the techniques used at Eagle Trappings.

113
Title: Protein concentration and heart weight to body weight ratio explain difference in aerobic capacity between Dark Agouti and Copenhagen rats.
Presenter(s): Evelyn Fuentes, Tatiana Graacyk
Department: BIOL
Advisor: David Rodenbaugh
Abstract: Protein concentration and heart weight to body weight ratio explain difference in aerobic capacity between Dark Agouti and Copenhagen rats. Evelyn Fuentes, Tatiana A. Graacyk, Adriane J. Maag, and D.W. Rodenbaugh Department of Biosciences, Minnesota State University Moorhead Moorhead, MN 56563 Inbred Dark Agouti (DA) rats have been shown to have a higher aerobic capacity than inbred Copenhagen (COP) rats. This difference might be due to the development of cardiac hypertrophy. Cardiac hypertrophy can develop with constant exercising and building of muscle; this is how the heart is strengthened. We predict that the DA rats have cardiac hypertrophy enabling them to have a higher cardiac output than the COP rats. Along with this, we hypothesize DA rats will have a higher plasma protein concentration enabling them to have a higher blood volume. This would enable them to carry more oxygen to the muscle cells, hence increasing their aerobic capacity. We have obtained blood samples to calculate protein concentration. Our data thus far shows a 17% difference with p=0.33 and n= 6 in the protein concentration with DA rats having a higher protein concentration than COP rats. We will increase our sample size by obtaining more blood samples from DA and COP rats. We will also collect heart samples to measure a heart weight to body weight ratio. Thus far there appears to be no significant difference in the heart to body weight ratio between DA and COP rats. Finally, we will study the ratio of excitation-contraction coupling of the heart, which has an effect on how much blood is pumped through the heart, by running a Western Blot using the heart samples obtained.

114
Title: Large Format Photography: A Lost Art
Presenter(s): Antony Anderson, Daren Dobson, Amanda Grant, Margaret Hamm, Matthew Johnson, Tassie Jones, Alexander Neumann, Jeffrey Opp, Joshua Sumbry, McKenzie Wallner, Catherine Wolsky
Department: ART
Advisor: Lana Leishman
Abstract: Large Format Photography is a lost art challenged by new technology. Take a step back in time and learn how the medium began. Come explore the possibilities that large format photography has to offer. Photography students will be on hand to demonstrate the use of this camera, and provide free portraits to participants. Examples of work produced by Large Format cameras will be on display.
Title: Ancient Egypt's Momentous Change to a Unified State Represented on Pottery
Presenter(s): Nicole Reisdorf
Department: ANTH
Advisor: George Holley
Abstract: Predynastic Egypt is filled with mystery and the unknown. A figure known as the “Bird Lady” was found in Ma’mariya, Egypt in 1907. It is dated to the Predynastic Period. Pots found from the same time period have a painted figure in exactly the same shape. Arms almost completely encircle the head with exaggerated hips and thighs. The shape of the arms are quite similar to the shape of horns above the head of the goddesses Bat and Hathor from later times in Egypt. The similarity between the “Bird Lady,” the figure on the pots, and the goddesses poses the question, “Are they connected?” In this paper I argue that the figurines of the “Bird Lady” is an early form of the goddesses Bat and Hathor.

Title: Treasury Advisory Committee on the Auditing Profession
Presenter(s): Sadie Olson
Department: ACCT
Advisor: JoAnn Segovia
Abstract: Presentation of the recently formed Treasury Advisory Committee on the Auditing Profession. Initiative is to enhance financial reporting making the presentation of financial information more meaningful and accessible to investors. Provide informed advice to the Secretary and the Department of Treasury. We will explain the principles, challenges, accomplishments and possible effects on the auditing profession. Additional Group Members: Jennifer Wooduff

Title: Identity Theft in America
Presenter(s): Sadie Olson
Department: ACCT
Advisor: James Hennes
Abstract: Approximately 750,000 cases of identity theft were reported in America last year. Identity thieves often ruin their victims’ credit and sometimes their livelihood. Personal information such as social security numbers and credit card information are very sensitive information but personal information is what identity thieves want. Identity thieves have many ways of obtaining personal information so the everyday American needs to be educated about identity theft and know many ways how to prevent identity thefts from obtaining their information.

Title: A technological perspective on Forensic Accounting and Fraud Detection
Presenter(s): Peter Wiedenholt
Department: MGMT
Advisor: Ashish Gupta
Abstract: Ever since the scandals involving Worldcom and Enron the need for forensic accountants has increased dramatically. Forensic accountants help businesses investigate potential fraud cases using various computer programs such as email recovery, hard drive searches, and image recovery software. Dvixel is one such program used to investigate the hard drive of a computer by recovering deleted files, Cookie View is another program used to view all cookies on a computer which allows the user to see the time and date the cookie was established. Forensic accountants not only research the computers used by potential criminals, but they also search telephone records to try and track who the person has been calling. These are just a few of the technologies used by forensic accountants in their fraud investigations. With the implication of the Sarbanes-Oxley Act of 2002 the demand for forensic accountants has increased due to companies fearing they will be prosecuted for falsifying their financial statements. In this study, we will provide state-of-art review of some of the key technologies used in this new area of forensic accounting.

Title: Poverty Reduction and Economic Growth in India
Presenter(s): Achala Acharya
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: This paper will attempt to explain rapid economic growth in India in the last fifteen years using econometric analysis. The paper will explore all the factors that might have led to the growth surge from structural reform, education and training and trade liberalization. The paper will also look at issues of wealth distribution, and see if the development has left the poor behind.

Title: China’s Economic Growth
Presenter(s): Sumi Sharma
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: This paper presents the economy of China and the growth it has experienced in the last twenty year using econometric analysis. This paper reviews China’s growth in industrialization and GDP. I will also study China’s future possibilities given a large population.

Title: Vietnamese Refugees and Mental Health: Causes and Treatment for Mental Health Issues
Presenter(s): Natalie Suleiman
Department: HIST
Advisor: Henry Chan
Abstract: After the Fall of Saigon on April 30, 1975, thousands of Vietnamese people evacuated Vietnam with the American military. Millions of others were left behind. Beginning in 1978, the Vietnamese left behind took matters into their own hands and fled Vietnam in small boats. These people became known as the “boat people”. The journey that the “boat people” took was emotionally and mentally damaging. Upon arrival in the United States, many Vietnamese refugees suffered from mental health problems. Not only did they suffer, the often did it alone, without professional help. In this research, the causes of mental health problems and barriers to treatments for “boat people” are examined. Suggestions are also made for successful care.

Title: Synthesis of semicarbazide-cyanoborane in ionic liquids
Presenter(s): Jeremiah Smith
Department: CHEM
Advisor: Gary Edvenson
Abstract: The reaction of sodium cyanoborohydride and semicarbazide hydrochloride in ionic liquids has been studied. The extent of reaction and the ability to isolate the semicarbazide cyanoborane product will be compared to when the reaction is carried out in THF. Characterization will be done by boron-11 and proton NMR spectroscopy.

Title: Ultraviolet radiation thresholds for gemmae of three liverwort species, Marchantia polymorpha, Marchantia inflexa, and Marchantia paleacea
Presenter(s): Jill Wavra
Department: BIOL
Advisor: Linda Fuselier
Abstract: Hildegard a Women Composer in a Man’s World Hildegard of Bingen was a Composer as talented as any man in the Middle Ages. Hildegard was the founder and abbess of the convent at Rupertsberg in Germany; she is not only famous for her poetry but the melodies she composed. Her life, trials, and expectations are interesting as well. She was historically remarkable in a world dominated by men. This presentation will show how Hildegard has had an effect on the musical world of her time. In this presentation I would like to introduce Hildegard to a new generation of music lovers. I will show how Hildegard as a women used her remarkable talent in a historically man’s world.
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Title: The Interpretive Role of the Shultz Site Ceramic Collection in Northeast Plains Prehistory

Presenter(s): Crag Ptcka

Department: ANTH

Advisor: George Holley

Abstract: The Shultz Site (32RM215) is a late prehistoric archaeological site located along the Sheyenne River in Ransom County, North Dakota. The site is poorly known due to the lack of a written site report. This ceramic collection of this site is important to the study of the Northeast Plains prehistory. Archaeologists have written about the collections and have made reference to the collection. In light of recent excavations conducted by MSUM along the Sheyenne River, a re-analysis of the Shultz ceramics can provide an understanding of the regional prehistory.

129

Title: Research in Contemporary Art and Design: The Work of Janine Antoni

Presenter(s): Tiffany Nordick

Department: ART

Advisor: Anna Aman

Abstract: In this presentation, I discuss the work of Janine Antoni, an American artist who integrates performance and sculptural art to put everyday activity in a new perspective. She uses a wide variety of media to capture the complex processes of making and viewing art. After a brief background of Antoni's life, I highlight influences that may have shaped her development as an artist. I focus on several of her art works and examine the experiences she had while producing them. As we will learn, the experiences that arise during the process of making art are considered by Antoni as valid as the final product itself.

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Title: Biesterfeld Ceramics

Presenter(s): Abraham Ledezma

Department: ANTH

Advisor: George Holley

Abstract: MSUM Archaeology Program is currently restudying the Biesterfeld site, an earth lodge village located on the Sheyenne River in Ransom County, North Dakota. This site was excavated by W.D. Strong in 1938 and reported by W.R. Wood in 1971. Wood devoted his ceramic analysis on rims and ignored the other parts of the vessel. Body sherds, which Wood merely counted, provide important information about what vessels looked like, how vessels were manufactured, what vessel looked like, and how these vessel traits varied across the village.

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Title: Effects of Shared Sound and Spelling on False Word Recognition

Presenter(s): Kristen Bouwman, Susan Johnson, Julie Przekwas

Department: PSY

Advisor: Christine Malone

Abstract: This experiment uses a recognition memory paradigm to explore the interaction of sound and spelling information in the early stages of spoken word recognition. Previous work with the recognition memory paradigm has confounded sound and spelling. In this experiment, stimuli were used to systematically manipulate shared sound only, shared spelling only, or both shared sound and spelling between study and test words in a recognition memory paradigm. If sounding and spelling determine the pool of candidates as the spoken stimulus unfolds, study words with only shared spelling (measles) should activate their corresponding target (measure) during study and seem more familiar at test, leading to false recognition errors of their target.

132

Title: Can You Hear Me Now? Technology and Learning For Deaf Students

Presenter(s): Peter Kleckner

Department: CMST

Advisor: Denise Gorsline

Abstract: As a deaf student, I am always looking for new technology to help me with my courses and to be able to navigate easier in a hearing world. As part of that process, which was prompted by a presentation I made for my Film 270 class, I have found an array of information about how technology can assist me and others.

1 To convey information in telecommunications field in communications equipment and information used by the deaf and hard-of-hearing (hoh).

2 To demonstrate equipment used by the deaf and hoh.

3 To present in video format the demonstration of closed-captioning on video.

4 To present on computer a method of using the telephone without the user using their voice to call someone.

133

Title: Advantages and disadvantages of radio frequency identification (RFID) technology

Presenter(s): Rebecca Keibert, Ashley Olson, Nathaniel Pearson

Department: MGMT

Advisor: Ashish Gupta

Abstract: Radio frequency identification (RFID) technology has been around for decades, but has just recently made its way into the public eye. Much confusion surrounds what it is, how it is used, and how it may be used in the future. This presentation will give a brief background of RFID technology to answer these questions while addressing its advantages and disadvantages.

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Title: A View of Women Administrators in Higher Education

Presenter(s): Rosemary Bakke

Department: MLA

Advisor: Michelle Melott

Abstract: We are interested in the effects of UV radiation on two study organisms in our lab; liverworts and fathead minnows. With respect to the liverworts, we are interested in the impact UV exposure has on the genetic integrity of haploid reproductive cells called gemma. In the fathead minnows, we are interested in determining if a substance secreted by the skin of these fish that is known to function in chemical signaling also has an additional function as a protectant against UV damage in these same skin cells. UV radiation impacts DNA by disruption of the chemical bonding in the sugar-phosphate backbone of the DNA molecule. The comet assay, or single-cell electrophoresis, is a simple method for detecting and measuring deoxyribonucleic acid strand breakage associated with various DNA damaging agents such as UV radiation. Cells embedded in an agarose matrix are lysed, allowing all cellular proteins to be removed. The nuclear DNA then unwinds under neutral conditions. Following lysis, the cells are electrophoresed and any damaged DNA migrates from the nucleus. After staining, a distinct comet may be visualized; all intact DNA remains in the head, while the tail consists of damaged or broken pieces of DNA. The extent of DNA liberated from the head of the comet is directly proportional to the amount of DNA damage. We will present the preliminary results of our use of the comet assay to examine the impact of UV radiation on liverwort and fathead minnow cells.
transgression followed by a regression that eventually regressed enough to give us the paleosols and fluvial deposits of the famous Morrison Formation. Belemnite rostra occur in a variety of lithologies in the Sundance, but appear to be most abundant in beds where they occur with other mollusks and bored cobbles. Belemnites are a prehistoric Cuttlefish-like creature that lived in these ancient seas, the fossil remains from these soft tissue squids are a conical spear-like feature called a Rostrum that protrudes from the top of their heads or their phragmocoe. Some soft parts are found in the fossil record although they are very rare. In one bed where Belemnites are particularly abundant we see evidence of very low rates of deposition, which leads us to believe that this was an indication of a Maximum Flooding Surface. The accumulations of skeletal remains in this case appear to be stratigraphic or sedimentological rather than the result of mass mortality or any other biological accumulation. Also, after this interval the overlying strata grade upward into progressively shallower water facies and eventually terrestrial facies indicating a marine regression and eventual demise of the Sundance Sea.

Title: An Investigation on MMP-9 mediated cell invasion and metastasis in non-small cell lung cancer

Presenter(s): Shyam Thapa
Department: BIOL
Advisor: Joseph Provost

Abstract: The sodium hydrogen ion exchanger isoform 1 (NHE1) is a ubiquitously expressed membrane protein ion exchanger. NHE1 has two primary functions including intracellular pH regulation and cytoskeletal anchoring or scaffolding. NHE1 allows for the creation of acidic extracellular environment by extrusion of protons for the intake of extracellular sodium ions. Matrix metalloproteinases (MMPs) are zinc dependent endopeptidases that degrade extracellular matrix proteins (ECM). ECM degradation via MMP secretion of migratory cells allows for tumor metastasis and angiogenesis to occur in cancer cells. MMPs are activated by acidic nancoenvironments. Therefore, we believe that MMP9 metastasis in invasion and metastasis is regulated by both the scaffolding and proton transport functions of NHE1. Using H358 and H1299 non-small cell lung cancer (NSCLC) cell lines the relationship between NHE1 and MMP-9 expression were studied. Urokinase-type plasminogen activator (uPA) converts zymogen plasminogen to plasmin protease that degrades ECM components and activates other collagens such as MMPs. By conducting a Zymogen assay using both uPA stimulated and unstimulated cells we were able to examine levels of MMP expression. Using ethyl isopropyl amiloride (EIPA) to inhibit NHE1 we examined the level of MMP expression in NSCLC in absence of active NHE1 activity. A zymogen assay was utilized to study MMP expression in the absence of NHE1 using NHE null NSCLC cell lines created by using lithium suicide selection. An MTT assay was conducted to examine levels of cell proliferation in uPA stimulated and unstimulated cells. NSCLC cell were treated with MMP inhibitor SB-3CT), EIPA, and methyl beta cyclodextrin (MPCD). MPCD disrupts lipid raft structures by extracting cholesterol from lipid raft domains. MMP9 are localized in lipid rafts domains. We would also like to study the relationship of MMP9 localization within lipid raft domains by treating both NSCLC cell lines and NHE1 null NSCLC cell lines with MPCD, EIPA, and emodin a chemical found to inhibit lipid raft clustering and colocalization of adhesion molecules within lipid raft domains.

Title: Credit Card Fraud

Presenter(s): Zia Warrainch
Department: ACCT
Advisor: James Hansen

Abstract: Credit card fraud is a wide-ranging term for theft and fraud committed using a credit card or any similar payment mechanism as a fraudulent source of funds in a transaction. The purpose may be to obtain goods without paying, or to obtain unauthorized funds from an account. I'm going to present a case of credit card fraud, its legal implications to the thief and to the victim. Credit card fraud is a growing problem and in my opinion everyone should take at least basic steps in securing their financial condition and avoid being the victim. My presentation will outline several steps an individual can take to keep their personal information secured and safe, such as using only trusted websites when shopping online and shredding credit card and other bank statements. Overall the more individual does to protect their financial information, the more difficult it is for others to obtain it and use it illegally.

Title: Belemnite Rostrum used as an Indicator of Marine Flooding Surfaces in the Jurassic Sundance Formation: Seminoe Reservoir Wyoming, USA

Presenter(s): Nick Kopiarsz
Department: GEOS
Advisor: Karl Leonard

Abstract: Belemnites literally cover the ground near ridges of the Sundance Formation around the Seminoe Reservoir in Southeastern Wyoming. A series of samples were collected from beds of the Sundance in hopes of better understanding the accumulations of this cephalopod. Many of the interbedded sandstones, mudstones, and limestone in the lower and middle parts of this interval are the results of a marine transgression that took place in the Middle Jurassic with the expansion of the Sundance Sea. The goal of the research was to better understand what was happening to sea levels during this time and what was the environmental setting that deposited these layers in the now present day Seminoe Reservoir. We expected to find a
142
Title: Interpretive Explanations of the Depictions of the Origin Myths of the Aztecs
Presenter(s): Ashley Rehling
Department: ANTH
Advisor: George Holley
Abstract: Aztec origin myths comprise many themes. Many of these themes have been depicted in the painted books, also known as codices. These books were made by natives and Europeanized-natives. I will aim to explain some of these themes as well as examine them. As well as examine the themes I will be pointing out examples that represent European misconceptions of native symbols. One such misconception involves the symbol of Mexico today of the eagle on a cactus holding a snake.

143
Title: Effectiveness of Advanced Solar Disinfection on Escherichia coli
Presenter(s): Nicole Haverland
Department: BIOL
Advisor: Kathryn Wise
Abstract: The purpose of this project is to determine the effectiveness of Advanced Solar Disinfection on reducing the number of viable Escherichia coli as measured by colony-forming units (CFU) over time. E. coli was chosen for this project because it is a typical indicator microbe used for assessing water quality. Theoretically, titanium dioxide on the surface of the product catalyzes the reaction between water and dissolved oxygen and sunlight to produce hydrogen peroxide. This acts to improve the normal action of sunlight to disinfect, through warming and direct action of the sunlight on the organisms. The use of titanium dioxide as a water disinfectant is a relatively new technology progressing out of necessity for discontinuing use of chlorination and other harmful disinfectants due to harmful by-products. Although tested as early as 2003, there has yet to a product to emerge that is both effective and inexpensive. The Advanced Solar Disinfection System was made here, at Minnesota State University Moorhead, and is a product that is inexpensive to make (~$5 per reusable system). It does, however, needs to undergo trials to test its effectiveness. This project is the first in a series of three possible projects spanning over a year and a half and if focussed on the biological assay for the Advanced Solar Disinfection system.

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Title: Exploring Business Opportunities in an Online Gaming Environment: A View from Second Life
Presenter(s): Karen Kochmann
Department: MGMT
Advisor: Ashish Gupta
Abstract: Second Life is a virtual world where individuals can create avatars and interact with other individuals on the global network. Conducting business is one of the many things to be a part of in Second Life. Of the individuals aware of this virtual world, many have taken advantage of the business opportunities in Second Life. After building a location hopefully you begin to earn Linden Dollars, the currency of Second Life. We would like to discuss the different kinds of business opportunities in Second Life and how some individuals who own businesses in Second Life have been successful. Also, we would like to discuss some of the ways these virtual businesses affect physical businesses that exist in the real world.

145
Title: Cyber Crimes: Identity Theft
Presenter(s): Cory Schumacher
Department: LGST
Advisor: Paul Kramer
Abstract: In this paper I will share the effects, both positive and negative of identity theft. In recent years identity theft has lead to an increase in not only financial theft, but also personal information that for some can never be compensated. In the past decade identity theft has been fueled by the nearly exponential increase in personal access to the internet. Identity thieves have virtually a limitless flow of information available at their fingertips. But the internet is more of an ending point in identity theft it primarily starts off right in your backyard. Even with vast amounts of anti-identity theft programs out there and constant warnings, most people still throw away bills and credit card information without destroying the papers preventing identity thieves from gaining access to their bank account numbers and other personal information. I will be discussing some of the effects identity thieves have had on their victims financial status and also ways identity theft should or could have been prevented.

146
Title: Feasibility Study of Sustainable energy on MSUM campus.
Presenter(s): Heather Sanden
Department: PHYS
Advisor: Stephen Lindaas
Abstract: Feasibility study of wind power and solar power on MSUM's campus. Including quantitative data and research observations to reduce fossil fuel energy use and make the campus more sustainable.

147
Title: Understanding Email Overload and its Implications on Workplaces
Presenter(s): Jared Hollands, Katie MacRae
Department: MGMT
Advisor: Ashish Gupta
Abstract: Email has greatly increased communication among people in the workplace. Messages, which used to take a few days to a week to arrive now land in an inbox in a matter of seconds; however, many employees are now faced with what is called email overload. It is not unheard of for employees to receive 200-300 emails every day. Email overload causes employees to spend time sorting through emails, deciding what is important and what is junk mail. This time which could be spent working on more important work related tasks. Meanwhile, not all employees are sorting through their inboxes to find the important messages. Some choose to simply hit the delete key inevitably missing valuable information. We will evaluate how email overload affects the workplace and discuss some potential solutions to this important problem.

148
Title: The effects of 9-hydroxy Xanthene on the erythrocyte membranes of hypertensive and normotensive male rats.
Presenter(s): Maria Lindsay
Department: CHEM
Advisor: Abcasa Pezetsh
Abstract: Spontaneously hypertensive (SHR) rats and normotensive (WKY) rats were treated with 9-hydroxy xanthene to determine the effects of the drug on blood pressure, pulse, and cardiac and red blood cell membrane fluidity. The rats were treated three times per week with 200 mg/100 g body weight for four weeks and blood pressure, pulse, and body weight were collected once weekly. At the end of the study blood was collected via heart puncture in heparinized tubes for membrane fluidity analysis. Using spin label technique and EPR, the values of maximum splitting parameter for fatty acid labels (5-SASL) incorporated in erythrocyte membranes of both SHR and WKY rats were compared. The results of this study will be presented.

149
Title: Magnetic Susceptibility Studies at Poverty Point State Historic Site
Presenter(s): Jessica Beard
Department: ANTH
Advisor: Rintza Dulan
Abstract: The earthworks at Poverty Point are part of an archeaic archaeological site constructed approximately 3,500 years ago. Located in northeastern Louisiana, Poverty Point State Historic Site consists of several mounds and a series of semi-concentric earthen ridges. Geophysical tests in October 2007 focused on data collection to examine natural and cultural soil distributions of earthen features at the site. Soil cores were collected and described, followed by a series of tests using a Bartington Instruments down-hole sensor to measure magnetic susceptibility deep within the soil profile. Field investigations at Poverty Point were placed across the ridges to study their construction and provide information regarding the extent of erosional processes and other disturbances affecting the structures. Within the plaza, a series of short transects and single tests supplemented the investigation of magnetic high and low circular anomalies shown in surface geophysical surveys by Drs. Hargrave and Clay. A discussion of our fieldwork methods and interpretative results of data collected at the site will be presented which illustrates the practical application of geophysical techniques used in non-destructive investigations of cultural resources.
become the more effective a communicator the child will be. These techniques: the COSO framework, adult risk model, and the fraud language development in their children. The more effective the use of these techniques the more effective a communicator the child will become.
A recent study by LaSalle (2007) addressed the effectiveness of the fraud triangle in contrast to the COSO framework in assessing fraud risk. The current study looks to expand this comparison to include the audit risk model. It is the authors' belief that similarities will be found between the success rates for fraud risk assessment of the COSO framework and the audit risk model.

158 Title: Emotional Impact of Cadaver Dissection on Undergraduate Students
Presenter(s): Patrick Self
Department: BIOL
Advisor: Patricia Wilsenden
Abstract: Students of human anatomy vary in their emotional response to human dissection. We surveyed students about their feelings on the ethics of cadaver dissection, level of nausea, feelings of incompetence, level of interest in the dissection theater, and to rate their ethnicity as either white European heritage or as people of color. The survey was administered four times during the semester: 1) before cadaver dissection, 2) immediately after first exposure cadaver dissection, 3) midterm (6 weeks after first exposure). Of four lab sections in the course, special emphasis was made in two of the sections to "humanize" the cadavers in an attempt to reduce anxiety over cadaver dissection. We found a significant effect of time and race, but no difference due to the humanizing intervention. Anxiety of all students increased dramatically upon initial exposure to cadaver dissection but white students showed full recovery at 6 and 16 weeks whereas students of color did not. Students of color carried higher levels of nausea and concern for ethics of human dissection, and lower level of interest in the subject of human anatomy and confidence in their competency.

159 Title: Estrogenic Activity on Hatching Rates of Medaka Fish Embryos
Presenter(s): Kayla Nagle
Department: BIOL
Advisor: Ellen Brisch
Abstract: Estrogenic substances have been identified in rivers and lakes associated with municipal effluents. In the Red River, Fargo, estrogenic activity is highest at low water flow downstream of the Fargo Municipal Waste Water Treatment plant (FMWWTP). Preliminary research on estrogenic activity downstream of the Fargo Municipal Waste Water Treatment Plant indicated an increase in hatching rates of fish embryos in downstream waters. Our hypothesis is "hatching success of Medaka fish embryos occur more quickly when placed in waters collected in downstream sites from the FMWWTP due to high levels of estrogenic compounds".

160 Title: Roman Sexuality; The Dynamics of Gender
Presenter(s): Elizabeth Johansson
Department: HIST
Advisor: Annette Morrow
Abstract: The issue of sexuality is particularly important to discuss in our time. Debates over civil unions, adoption, sex changes and even civil rights are heavily influenced by our society's perception of gender as a stagnant institution. In Roman culture, however, sexuality and gender are displayed in ways very different from our own. This presentation will explore just one other culture's way of "doing" gender.

161 Title: Media Representation of Muslims and Islam
Presenter(s): Goerkerem Yesilnur
Department: MC
Advisor: Daniel Johnson
Abstract: The word Islam means "Peace," however, most people in the West do not associate the religion of Islam with peace. After September 11 newspapers are loaded with headlines, such as "In the Name of Allah." Today's media plays a crucial role in shaping our society. I want to research how the media effects our view of Muslims, Islam, and the Middle East.

162 Title: Communicative Strategies when Interpreting a Foreign Language
Presenter(s): Harri Mingo
Department: CMST
Advisor: Denise Gorseine
Abstract: The United States of America is increasingly more becoming a country of mixed ethnicities, cultures, and languages. It has been found that many Americans lack the education to properly understand communications and words with people of different cultural backgrounds. This presentation will explore the dynamics of intercultural communication and social patterns that are occurring in today's society. Communication theories will be used to explain the current trends, as well as how to communicate cross-culturally.

163 Title: The comparison of two reserves in Costa Rica, Cabo Blanco and Monteverde.
Presenter(s): Molly Dowling, Kelly Hebert, Jenny Neuberger, Evan Wicker
Department: BIOL
Advisor: Linda Fuselier
Abstract: Tropical forests in Costa Rica harbor a high diversity of plant and animal life yet are endangered by the impact of human activity. There are different philosophies behind conservation efforts including preservation and conservation. Preservation is when an area is fenced off and no one is allowed into the area. Conservation is where an area is protected, but people are still allowed to travel within the area. In Costa Rica, we will visit an absolute reserve, Cabo Blanco, and a biological reserve, Monteverde. At each location, we will meet with managers and educators to understand threats to biodiversity in each reserve system. Managers will help us assess biological and economic impacts of the reserve systems and to assess the impact of human encroachment on biological reserves compared to absolute reserves. We expect Monteverde to have lower biodiversity and overall health when compared to the Cabo Blanco reserve due to the tourism and human destruction. Through all of the differences we expect to observe between these two reserves, Cabo Blanco should be the healthiest and best form of reserve for the habitat.

164 Title: Michelson Interferometer
Presenter(s): Kristin Rosenau
Department: PHYS
Advisor: Andrea Shastri
Abstract: The Michelson interferometer is most well known from the famous Michelson-Morley experiment in which they searched for "luminferous ether." However, as the experiment established, light does not travel through ether and the hypothesis was disproven, but the interferometer has many other uses. The interferometer consists of a detector, two mirrors, and one semi-transparent mirror. Light travels to the semi-transparent mirror and, when it hits, the light diverges and hits the mirrors (which are at 90° angles to one another). The light reflects off of the mirrors and back to the semi-transparent mirror, where it converges, and hits the detector. In this experiment, a pane of glass will be put in between the semi-transparent mirror and one of the other mirrors. Since one path the light goes through glass and in the other path light only travels through air, they will take different times to reach the detector. This produces an interference pattern which is used to find the index of refraction of air.

165 Title: Nuclear Magnetic Resonance of Solid State Hydrides
Presenter(s): Devin Kasper
Department: PHYS
Advisor: Andrea Shastri
Abstract: Hydrogen storage systems are very important for the development of hydrogen powered vehicles. As a result, understanding metal hydrides—metal alloys into which hydrogen may be infused, stored, and retrieved—is an important scientific problem. One such metal hydride is examined in this study, sodium alanate (NMR). In NMR, the sample is placed in a magnetic field. The nuclei of the atoms, which have a nuclear spin, align with the external magnetic field. The relaxation time, T1, is the time required for the nuclei spins to realign with the external field after disruption, and gives information about the interactions between the nucleus and the environment. In particular, the height of the energy barrier—the barrier over which the hydrogen must jump to diffuse through the metal.
hydride—may be determined from an analysis of the data if T1 is measured as a function of magnetic field and temperature. T1 measurements and their analysis will be presented, with intent of finding the barrier height for hydrogen diffusion in the hydride.

166
Title: English, A Dying Language?
Presenter(s): Stephanie Simonson
Department: LANG
Advisor: John Hall
Abstract: What has happened to the English language? It seems one cannot look through a book or report published professionally without finding grammatical and/or punctuation errors. A survey will be distributed among MSUM students to see if they are able to identify and fix errors. The survey will contain both a question regarding how confident they feel using the English language in academic and professional situations and if they would be interested in a grammar/ punctuation class if MSUM were to offer one. Though my survey project cannot hope to attain any kind of professional “diagnosis” of the state of the English language, I hope to find glimmers of information through research about why errors are so common today. Have English speakers lost respect for the language? Do they feel sufficiently educated about its usage? Finally, are they satisfied with their current level of knowledge of the English language?

167
Title: The Effects of Geomagnetic Field Alterations on larvae of a migratory dragonfly
Presenter(s): Mariah Clements
Department: BIOL
Advisor: Linda Fuselier
Abstract: The common green darner, Anax junius, is a dragonfly commonly found throughout North America. Most northern populations have within them two developmental cohorts: migrants and residents. Migrants travel to Florida where they mate and produce offspring that will migrate back north to their geographic origin. Scientists have made great strides in charting where and under what conditions A. junius flies to achieve this trip. However, few studies have addressed the physiological basis for their ability to perform this migration. One common hypothesis is that they, like their odonate relatives, use the Earth’s geomagnetic field to navigate. In this study I investigate the ability of larvae of this species to respond to changes in the geomagnetic field, simulated using a Helmholtz coil apparatus. The dragonflies are each placed into a gridded glass tank exposed to a control treatment followed by either a reversed magnetic field or zero magnetic field. Each treatment lasts for 3 minutes during which movement, as number of lines crossed and orientation at 30 second intervals as head direction are recorded. I hypothesize that A. junius will respond to changes in Earth’s usual geomagnetic field by orienting their bodies toward or against the magnetic current, as observed in a study of butterflies. However, it is also possible that, because they are aquatic, they may employ a different mechanism not seen before in scientific studies.

168
Title: The Highways and Byways of Language: A Comparative Study between Spanish and English
Presenter(s): Kathryn Shorna
Department: SPAN
Advisor: Benjamin Smith
Abstract: Have you ever wondered whether those “10-minute-a-day” Spanish programs are effective? Each language is unique and amazing and requires a lot more than ten minutes daily to master. Although there are often surprising similarities between languages of the same family, Spanish and English are both distinct in nature and studying the differences (and common threads) aids in the overall mastery of both the native and target language. This presentation will compare similarities and distinctions between Spanish and English in three aspects of linguistics: sentence structure (syntax), sounds and pronunciation (phonology) and the rules applied to the structure of words within sentences (morphology).

169
Title: The Payoff of Self-Directed Work Teams
Presenter(s): Charles Johnson
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: In recent years some companies have experimented with teams that lack centralized control. These self-directed or self-managed work teams are an attempt to increase productivity by making the group as a whole responsible for successfully completing its tasks, while also empowering the team members with the authority to control how the work gets done. With the team as a whole sharing in both the responsibility and authority, individual members must learn to 'manage' themselves and their teammates; teams must become self-regulating. Teamwork must collectively reward and punish their own members to provide incentives for each individual to contribute to success as a whole.

170
Title: The Rise of a Russian Francophile: Marie Bashkirtseff
Presenter(s): Levi Tronnes
Department: HIST
Advisor: Margaret Sankey
Abstract: The choice of identity in today's culture we rarely look back on the past for help in understanding or determining who we are. Identity is an essential to understanding both culture and class within certain ethnic groups Francophiles being one such group. This paper deals with the emergence of the Russian Francophile a group of people, though in my case an individual who adheres to the cultural norms and practices of a 19th century Paris and not Russia. The rise of the dual identity brings to focus a large question what causes an individual to abandon tradition for acceptance. The study of 19th century Europe and developing theories on why Parisian culture would play a pinnacle role of Europeans of the time is a look at cultural history of Europe as a whole. The real question then as stated prior is why an individual or group abandons their true identity for the use of a more social or politically acceptable identity. This would be a question that both would daunt many Russian citizens of the late 19th century. This would not only daunt Russian social scientists but 20th century historians and the parallels they could draw between Russia and France and America and Britain. Thus the problem of abandonment of identity would consume my research. My research would take me into several fields of study not just History, but Art History, Social Science's, Psychology, and even Women's Studies. I would several written sources including one major primary source the diary of my Main Subject Marie Bashkirtseff. Through her experiences in Nice, France and her life I would get a first hand look at the problem and the opportunities one face when living under the pressure of two identities one Russian the other French, a private and public face. Through Marie and her tribulations I would come to understand the pressure of being socially acceptable. The Conclusion the answer would ultimately become clear upon looking at Marie's life. That to become socially acceptable in a time when position was everything, Victorian society would insure that one culture would reign culturally supreme in Marie's time it was France that would hold the power over cultural dominance, this can be seen in Marie's art very similar to the French Schools of Impressionism. Though ultimately she would remain independently Russian even if it was only within the confines of her home Marie lived a life of dual identity with her French identity dominating it till her death at the age of 25.
172
Title: Effect of Wal-Mart Supercenters on Grocery Prices in Minnesota
Presenter(s): Matthew Dorgen
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: Wal-Mart is a very controversial company, and is should be scrutinized closely. In this spirit, I have attempted to see if Wal-Mart Supercenters have an effect on the price levels of groceries in a community. To do this, I constructed a weighted index of goods for three separate categories: Wal-Mart Supercenters, the largest supermarket within a five mile radius of a supercenter, and a comparison supermarket not near a Wal-Mart.

173
Title: Risk Management within Financial Institutions
Presenter(s): Lindsay Becker, Leshel Heaton, Karen Kochmann
Department: MGMT
Advisor: Ashish Gupta
Abstract: It is crucial for a bank to understand risks involved with business practices and to manage those risks with appropriate strategies. Banks are faced with both internal and external risks which affect their day to day decisions. It is important to analyze the key risks: market, credit, operational and performance, in terms of possible consequences or benefits. Effectively managing risk aid in the overall success of the organization.

174
Title: Feasibility Study of the Vaisala GMP222 Probe and GMM222 Monitor in the Atmospheric Sounding of Carbon Dioxide
Presenter(s): Bernard Fraser
Department: PHYS
Advisor: Linda Winkler
Abstract: I will present my results and conclusions from analyzing the sample rates, resolutions, and other limits of performance of the Vaisala probe and monitor in various atmospheric conditions. I will then discuss the feasibility of using the probe and monitor as part of a payload in a rocket flown in the troposphere.

175
Title: Kirk Nugent's Afrocentric speech and Knowles Borishade's Model
Presenter(s): Dadeh Jallah
Department: CMST
Advisor: Timothy Borchers
Abstract: It is evident that language is used differently among Africans or African Americans than other cultures. Due to these barriers, Knowles-Borishade (1991) provides us with a model that is used effectively to demonstrate the African Retoric. In order for us to understand how rhetoric is used in the African culture we will have to focus on Afrocentric rhetorical theories. In this presentation, I will demonstrate how Kirk Nugent’s poetic speech from youtube.com achieves harmony with his audience.

176
Title: Exploring inquiry with on-line simulations and the 5E model of instruction
Presenter(s): Jeremy Grabinger, Kerin Hanson
Department: CHEM
Advisor: Richard Lahti
Abstract: “Exploring inquiry with on-line simulations and the 5E model of instruction” The 5E model is a constructivist model of learning based on the premise that learners construct new knowledge on top of prior knowledge. Computer simulations can provide a shared, hands-on experience for students at little to no cost for the school and greatly reducing the time necessary to produce a significant amount of data. This presentation of two lessons from a high school Human Biology course will illustrate the effective integration of these simulations into units on Genetics and the Nervous System.

177
Title: Division 1 College Football Ranking Methods
Presenter(s): Sean Hauck
Department: MGMT
Advisor: Ashish Gupta
Abstract: Our group is going to focus on how computers select the rankings in Division One College Football. The Bowl-Championship-Series College Football Ratings are updated based on the football teams’ performance during the previous week by the use of computers. We will discuss in depth how and why this is done by computers, and any benefits or downsides of the system.

178
Title: Depression in Young Adults
Presenter(s): Marissa Stewart
Department: AT
Advisor: Dawn Hammerschmidt
Abstract: Many young adults suffer from depression in today’s society. Depression is not well understood so most youth aren't aware that they have this particular disorder. The diagnostic criteria for depression in youth is if they have been suffering from five or more of symptoms commonly listed for depression most of the time for a two week period or longer. Depression can happen for several reasons in a young adults’ life. How depression is handled depends on the type and severity of the depression.

179
Title: Collaboration of International and Financial Accounting Standard Boards on Conceptual Framework project
Presenter(s): Ivan Ayubashev, Angela DeHaan, Heather Holland
Department: ACCT
Advisor: Joann Segovia
Abstract: Development of accounting industry with Conceptual Framework project.

180
Title: Operations Management at a Casino
Presenter(s): Jason Johnson, Maggie Wolff
Department: MGMT
Advisor: Ashish Gupta
Abstract: Within the casino industry, managers need to understand all of the important features of the business. There is always the potential for a loss; this poster will include a thorough look at a casino’s responsibility of the proper management and marketing of money, employees, slots, and others. It will also discuss the importance of a casino floor plan and the significance of security and surveillance.

181
Title: Enterprise Resource Planning
Presenter(s): Lacey Hogness, Jennifer Vattaks, Candace Wysocki
Department: MGMT
Advisor: Ashish Gupta
Abstract: The main goal of Enterprise Resource Planning (ERP) systems is to tightly integrate the functional areas of the organization, and put to use all of its resources. Once integrated, an organization's communication and productivity are much more efficient, updating old systems with new technology to handle increases in business. SAP is currently the leading ERP they handle in how predictions are made and how interpretations are reached. These software vendors offer a great deal to organizations, however ERP systems are not for everyone. They are extremely expensive and complex for even the most organized companies. ERP systems can also be very time consuming, since the organization needs to sometimes change its entire business process to fit the ERP's predefined processes. But if they are willing to accept the risks, ERP systems can greatly benefit organizations.

182
Title: Series of Lessons addressing Global Climate Change
Presenter(s): Avery Cota, Jonathan Smith
Department: ED
Advisor: Richard Lahti
Abstract: The 5E instructional model is designed using the psychological theories of Piaget and lesson organization as used in the Science Curriculum Improvement Study to lead students into experimental and investigative learning. This model uses five phases: engagement, exploration, explanation, elaboration, and evaluation to construct a learning environment in which students will benefit. A series of lessons will focus on the integration of computer simulation to explore global climate change in terms of how predictions are made and how interpretations are reached. The addition of computer simulations into lesson plans will enhance the investigative and experimental design giving more direction to the unit focus.
183
Title: Characterizing Magnetic Nodules Recovered from Archaeological Sites
Presenter(s): Avery Cota
Department: ANTH
Advisor: Craig Jasperse
Abstract: Primarily localized in the substantia nigra and segmental areas of animal brain tissue, the neurotransmitter dopamine (DA) mediates numerous central nervous system functions including motor activity, emotion, and reward. Synaptic and extracellular DA concentrations are controlled by the dopamine transporter (DAT), which is activated or down-regulated in response to both allosteric and feedback mechanisms including protein kinase pathways and dopamine receptor feedback signals from adjacent neuronal membrane surfaces. Many mechanisms that play a role in DAT regulation have been characterized, such as PKC-dependent DAT trafficking (Loder et al., 2003). However, physiological DAT activity is likely to be mediated by other serine/threonine/tyrosine kinases, such as Extracellular Signal Regulated Kinases 1 and 2 (ERK1/2). ERK1/2 has been implicated as playing a role in DAT phosphorylation (Moron et al., 2003). However, DAT activation via ERK1/2 has not yet been defined as a direct activation mechanism or as an activation mechanism that requires intermediate components. It is therefore of interest to elucidate the mechanism by which ERK1/2 phosphorylates/activates DAT. The proposed ERK1/2 phosphorylation/activation site is a residue on the intracellular N-terminus of DAT, threonine 53, and the resulting phosphorylation at this residue will alter DAT transport. This hypothesis will be tested by various methods. Cell lines which stably express recombinant or native DAT will first be cultured under a number of conditions to reduce basal ERK activity levels and will then be subjected to a number of agonists to stimulate ERK1/2 activity as measured by DAT phosphorylation. The activation of DAT by ERK will then be further assessed through treatment with inhibitors of the ERK pathway or expression of dominant-negative MEK. Antibodies will also be raised against recombinant phospho-DAT so that immunoblotting may be used to assess the level of DAT phosphorylation in these cells.

184
Title: Spectrographic Analyses of Ceramic Sherds from the Sprunk Site, ND
Presenter(s): Avery Cota
Department: ANTH
Advisor: Michael Michlovic
Abstract: Fourier Transform Infrared Spectroscopy (FTIR) was performed on a set of ceramic sherds from a prehistoric site in eastern North Dakota. FTIR is used to identify the cooked residues to plant or animal species on the interior surface of the ceramic sherd. The ceramic samples analyzed are from vessels recovered from the Sprunk Site, a 15th century Native American Village on the Maple River in Cass County, ND. These vessels were previously studied at Minnesota State University Moorhead’s electron microscope lab, which showed the presence of inner and outer coatings on the ceramic vessels. The interior coating of these samples are rich in organic material and varying proportions of bone material. Identifying the cooked residues will provide insight into the Northeastern Plains Village Peoples who lived at the Sprunk site. The results of the electron microscope study and the FTIR analysis will help to answer key questions regarding the lifestyle of the village peoples studied.

185
Title: Artistic Processes in Music Composition
Presenter(s): Dustin Schultz
Department: MUS
Advisor: Laurie Blunson
Abstract: The creative process is a conduit for the realization of abstract ideas and thought concepts, and is an individual and introspective process. For each composer and artist it is inimitable. It is as much about personal philosophy as it is about simple sound preference. In this presentation I will discuss my own personal creative process and artistic philosophies, as well as my development as a composer. We will listen to an example of my own work and I will discuss the composition process, as well as the idea and concepts behind it. I will present my reasoning for composing with samples and found sound objects, and will also discuss my preference for composing all or in part for electronic media. This presentation will look at the broader development of my artistic aesthetic thru examination of a specific example of my own work.

186
Title: Applications and Synthesis of a Pyrazolidinone Chiral Relay System for Asymmetric Alkene Additions
Presenter(s): Kristoffer Brandvold
Department: CHEM
Advisor: Craig Jasperse
Abstract: Pyrazolidinone rings offer a promising route to enantioselective alkene additions. Our target product is promising for diastereoselective conjugate addition. Diastereoccontrol involves "chiral relay", in which the methyl group on a chiral carbon (permanent stereocenter) controls the stereochemistry of a fluxional nitrogen, such that the benzyl group can provide face shielding for conjugate additions to the alkene. Pyrazolidinone synthesis has already been achieved, and the scope of auxiliary addition and subsequent acylation will be discussed.

187
Title: Forecasting Crude Oil
Presenter(s): Prashant Shrestha
Department: ECON
Advisor: Oscar Flores-Ibarra
Abstract: In this paper i will be forecasting the price of the crude oil from the date 1980-2007. What will affect the demand for the crude oil prices and which model could give us a better forecast.

188
Title: An experimental approach to characterizing direct ERK-mediated phosphorylation of the dopamine transporter.
Presenter(s): Kristoffer Brandvold
Department: CHEM
Advisor: Joseph Provost
Abstract: Primarily localized in the substantia nigra and segmental areas of animal brain tissue, the neurotransmitter dopamine (DA) mediates numerous central nervous system functions including motor activity, emotion, and reward. Synaptic and extracellular DA concentrations are controlled by the dopamine transporter (DAT), which is activated or down-regulated in response to both allosteric and feedback mechanisms including protein kinase pathways and dopamine receptor feedback signals from adjacent neuronal membrane surfaces. Many mechanisms that play a role in DAT regulation have been characterized, such as PKC-dependent DAT trafficking (Loder et al., 2003). However, physiological DAT activity is likely to be mediated by other serine/threonine/tyrosine kinases, such as Extracellular Signal Regulated Kinases 1 and 2 (ERK1/2). ERK1/2 has been implicated as playing a role in DAT phosphorylation (Moron et al., 2003). However, DAT activation via ERK1/2 has not yet been defined as a direct activation mechanism or as an activation mechanism that requires intermediate components. It is therefore of interest to elucidate the mechanism by which ERK1/2 phosphorylates/activates DAT. The proposed ERK1/2 phosphorylation/activation site is a residue on the intracellular N-terminus of DAT, threonine 53, and the resulting phosphorylation at this residue will alter DAT transport. This hypothesis will be tested by various methods. Cell lines which stably express recombinant or native DAT will first be cultured under a number of conditions to reduce basal ERK activity levels and will then be subjected to a number of agonists to stimulate ERK1/2 activity as measured by DAT phosphorylation. The activation of DAT by ERK will then be further assessed through treatment with inhibitors of the ERK pathway or expression of dominant-negative MEK. Antibodies will also be raised against recombinant phospho-DAT so that immunoblotting may be used to assess the level of DAT phosphorylation in these cells.

189
Title: Reforming Health Care
Presenter(s): Matthew Hanson
Department: PCL
Advisor: Barbara Headrick
Abstract: This paper will examine the alternatives in the future of health care policy. Specifically the possibility of universal health care coverage, it’s alternatives, and its status in the public policy environment.

190
Title: the effects of abuse on adolescent teen run-aways
Presenter(s): Ashley Love
Department: ACCT
Advisor: Deborah White
Abstract: This presentation will cover professional studies conducted on the effects of run-away teens in relation to abusive situations they endure before reported homelessness, the findings will be covered as well as further areas of research.

191
Title: Characterizing Magnetic Nodules Recovered from Archaeological Sites
Presenter(s): Jessica Beard, Avery Cota
Department: ANTH
Advisor: Rinita Dalan
Abstract: Magnetic nodules have been recovered from numerous archaeological sites with different cultural contexts, ages, and soil parent material. Prior research focused on recovery and expanding the number of sites from which we had soils to sample. When examined
under a microscope we see that nodule morphology varies between different sites, but also in samples from a single location. We are working on defining a set of raxognostic criteria based on observed surface textures, color banding/mottling or lack of, and the presence or absence of inclusions. These morphological characteristics will be studied further using an electron microscope. This analysis help us to understand their formation and variability.

192
Title: Plant Physiology Laboratory 2008: A comparative investigation into the photosynthetic properties of Corn and Presenter(s): Switch Grass
Nathaniel Bishop
Department: BIOL
Advisor: Chris Chastain
Abstract: Interest in ethanol based biofuels has increased in recent years, partly due to increases in gasoline as well as the concern over fossil fuel consumption and global warming. Currently, most ethanol is produced from the fermentation of corn-grain with the rest of the plant being discarded. A more environmentally acceptable way to produce ethanol for fuels is to use cellulose instead of grain starch as the feedstock for ethanol fermentation. An ideal plant to provide cellulose for this purpose is Switch Grass (Panicum virgatum). It is native to our prairies, grows on marginal lands, is perennial and therefore does not need to be replanted. However, before committing to the use of Switch grass for use as a source for ethanol production, it is important to assess its photosynthetic properties since photosynthetic rates are directly correlated with how much cellulose a plant accumulates (e.g., biomass). We hypothesize that Switch Grass, as a naturally occurring plant species that has undergone continuous natural selection, will have superior photosynthetic qualities to corn, which is a domesticated, artificially selected crop species, and therefore superior to corn for use in producing ethanol. To test this hypothesis, we measured several important photosynthetic parameters in both Switch Grass and corn for comparing the overall photosynthesis potential of each respective species grown under optimal conditions. A summary of our tests and the final outcome of this study will be presented in detail.

193
Title: A comparative investigation into the photosynthetic properties of Corn and Switch Grass
Presenter(s): Deborah Pestka
Department: BIOL
Advisor: Chris Chastain
Abstract: Interest in ethanol based biofuels has increased in recent years, partly due to increases in gasoline as well as the concern over fossil fuel consumption and global warming. Currently, most ethanol is produced from the fermentation of corn-grain with the rest of the plant being discarded. A more environmentally acceptable way to produce ethanol for fuels is to use cellulose instead of grain starch as the feedstock for ethanol fermentation. An ideal plant to provide cellulose for this purpose is Switch Grass (Panicum virgatum). It is native to our prairies, grows on marginal lands, is perennial and therefore does not need to be replanted. However, before committing to the use of Switch grass for use as a source for ethanol production, it is important to assess its photosynthetic properties since photosynthetic rates are directly correlated with how much cellulose a plant accumulates (e.g., biomass). We hypothesize that Switch Grass, as a naturally occurring plant species that has undergone continuous natural selection, will have superior photosynthetic qualities to corn, which is a domesticated, artificially selected crop species, and therefore superior to corn for use in producing ethanol. To test this hypothesis, we measured several important photosynthetic parameters in both Switch Grass and corn for comparing the overall photosynthesis potential of each respective species grown under optimal conditions. A summary of our tests and the final outcome of this study will be presented in detail.

195
Title: What is the positive/negative impact of social networking websites such as facebook and myspace
Presenter(s): Ezuapt Kimirei, Aghogho Obebeduo
Department: MGMT
Advisor: Ashish Gupta
Abstract: We will explain the concept of Social Networking; identify some of the major social networking websites and potential users. Discuss their history or creation, that is how it all started and what purpose it was originally meant for and consequently how it became what it is today. We will also focus on the positive and negative impact of social networking sites; detailed expansion on cyber bullying, and the role of social networking sites and steps that are being taken to reduce the risks users face on such sites.

196
Title: The Legalization of Marijuana
Presenter(s): Anthony Olson
Department: POL
Advisor: Barbara Headrick
Abstract: I am going to tell the reasons for and reasons against the public policy of the legalization of marijuana.

197
Title: Operations Management of Record Company
Presenter(s): Shane Miller, Nathan Pitcher
Department: BUS
Advisor: Ashish Gupta
Abstract: A Record company signs artists to a recording contract to go into the studio and record songs in which the company will fund through the recording process, promote the cd, and distribute to retailers in order to make a profit. The artist will not see any money until the money advanced to the artist for recording expenses and other necessities is recouped to the record company. No record company will sign an artist in the music industry unless they think the artist can make them money. There are different types of record companies, which use different methods in their management. We are going to compare the operations of a major record label to that of an independent record label.

198
Title: Movements of Painted Turtles (Chrysemys picta bellii) in Relation to Habitat Characteristics in Clay County, Minnesota
Presenter(s): Morgan Effelt, Megan Lisburg, Jill Wavra
Department: BIOL
Advisor: Donna Stockrahm
Abstract: In a long-term study, about 630 painted turtles (Chrysemys picta bellii) have been live-trapped during the summer/early fall of 2001-2007 in Clay County, MN. To study growth rates, survival, population characteristics, and movements. Two sloughs (>2 km apart) were trapped, 2.7 ha and 6.2 ha, respectively, with 3 traps per slough. For each captured turtle, outer scutes were notched for individual identification. Turtles were weighed, sexed and measured for length
Title: Investigations of Croton's Formula
Presenter(s): Alexander Freed
Department: MATH
Advisor: Sidney Drouhlet
Abstract: We investigate Croton's Formula in R2. A nonvertical line L of the form y = mx + b can be parametrized by the pair (m, b). Suppose C is a curve of finite length in R2. For a line L corresponding to (m, b) let n(m, b) = the number of points in which L intersects C. We discuss our investigations of the derivation of, and examples of, Croton's Formula in the form \( \int_0^a f(x) \, dx = \int_0^b f(y) \, dy \) for a line L.

Title: This Transgression Will Not Stand: A Comparison and Characterization of a High Frequency Sequenced and Flooding Surfaces Using Conodont Distribution Patterns and Sequence Stratigraphy: Iola Limestone (Upper Pennsylvanian; Iowa and Kansas)
Presenter(s): Tabb Prissel, Nathan Wright
Department: ANTH
Advisor: Karl Leonard
Abstract: Observing spatial distribution patterns of conodonts can show what the depositional basin was like during the period the cyclothem was created. Results of spatial observations offer clues and evidence to water depth, environmental energy, shore line location, advance and retreat direction and higher resolution sea level fluctuations that show a cyclothem is more than the result of just a simple transgression and regression. By increasing both temporal and spatial resolution the Iola Limestone should be found to be far more complex than previously imagined. Conodont samples were collected from two sections of the Iola near Winterset, Iowa, and from five sections in eastern Kansas. Samples were processed for conodonts, and multivariate statistical methods were applied to temporal and spatial distribution patterns. Spatial distribution gradients relative to correlative surfaces at the base and near the top of the Muncie Creek Shale are the principal focus of this study. Additional study of these sections will also help identify key changing points of the Muncie Creek member. The Winterset section of the Muncie Creek is calcareous with much bentonic fauna and very thorough bioturbation. The Holiday Drive section of the Muncie Creek is more carbonaceous and phosphatic with bioturbation limited to upper areas. A better understanding of this core shale will lead to a better understanding of the Iola Limestone and what the depositional basin was like during the Iola deposition. Ideas of the depth and energy of the deposition can also be obtained by the previously mentioned conodont distribution patterns. Temporal and spatial trends in conodont distribution patterns may help clarify the relationship of the Iola in Iowa and Kansas.

Title: Oxidation of Benzyl Alcohols by Copper(II)-salen Complexes
Presenter(s): Rachel P. Branson and Jeffrey J. Bodwin
Department: CHEM
Advisor: Jeffrey Bodwin
Abstract: The selective and catalytic oxidation of organic substrates is a critical step in a wide variety of industrial, biological and environmental processes. Copper(II) complexes have been shown to be competent in a number of these applications and offer the advantages of relatively high chemical stability and environmentally friendly reaction conditions. This poster will present our work toward development of a catalytic copper(II) complex based upon the well-known N,N'-bis (salicylidene) ethylenediamine "salen". In these initial studies, the substrate veratryl alcohol (3,4-dimethoxybenzyl alcohol) will be used to allow the reaction to be monitored by gas chromatography. Veratryl alcohol is also an accepted model for the oxidations required in paper processing applications.

Title: A comparative investigation into the photosynthetic properties of Corn and Switch Grass
Presenter(s): Hashini Herath, Bonnie Swanberg
Department: BIOL
Advisor: Chris Chastain
Abstract: Interest in ethanol based biofuels has increased in recent years, partly due to increases in gasoline as well as the concern over fossil fuel consumption and global warming. Currently, most ethanol is produced from the fermentation of corn-grain with the rest of the plant...
being discarded. A more environmentally acceptable way to produce ethanol for fuels is to use cellulose instead of grain starch as the feedstock for ethanol fermentation. An ideal plant to provide cellulose for this purpose is Switch Grass (Panicum virgatum). It is native to our prairies, grows on marginal lands, is perennial and therefore does not need to be replanted. However, before committing to the use of Switch grass for use as a source for ethanol production, it is important to assess its photosynthetic properties since photosynthetic rates are directly correlated with how much cellulose a plant accumulates (e.g., biomass). We hypothesize that Switch Grass, as a naturally occurring plant species that has undergone continuous natural selection, will have superior photosynthetic qualities to corn, which is a domesticated, artificially selected crop species, and therefore superior to corn for use in producing ethanol. To test this hypothesis, we measured several important photosynthetic parameters in both Switch Grass and corn for comparing the overall photosynthesis potential of each respective species grown under optimal conditions. A summary of our tests and the final outcome of this study will be presented in detail.

207
Title: Gammarus Lacustris chemical alarm cue latency
Presenter(s): Mathew Rugg
Department: BIOL
Advisor: Linda Fuselier
Abstract: Both predator and prey species use chemical cues to send "public" messages in aquatic environments. Cues from a predator or chemicals emitted from harmed prey inform other individuals to change their behaviors to lessen predation risk. Alarm cues are released from a prey organism when a predator successfully attacks. Gammarus lacustris, an amphipod crustacean found throughout marine, freshwater, and estuarine/bayish habitats, have been shown to possess cells containing chemical alarm cue. When subjected to these alarm cues, G. lacustris will lower their risk of predation by decreasing activity and lowering themselves in the water column. However, no studies have been done to determine how long G. lacustris chemical alarm cues remain viable as public information regarding predation risk. In this experiment, I will determine the latency of G. lacustris alarm cues by testing response of individuals exposed to fresh and aged cues. I predict that cue latency will be approximately six hours, at which point G. lacustris no longer respond to the cue as a signal.

208
Title: Introduction to some of the technological changes in the Accounting profession.
Presenter(s): David Casper, Trevor Nelson
Department: ACCT
Advisor: Ashish Gupta
Abstract: XBRL is a method of tagging and reporting financial information. XBRL can increase the security of shared information and provide a user with up-to-date information. XBRL is currently being used by some foreign countries and when it is expected to be adopted by the SEC. We will outline how XBRL is being used currently in the business world and how it may affect accounting professionals.

209
Title: Plant Physiology Laboratory 2006: A comparative investigation into the photosynthetic properties of Corn versus Switch Grass
Presenter(s): Anil Bhatta, Lunu Manandhar, David Teige
Department: BIOL
Advisor: Chris Chastain
Abstract: Interest in ethanol based biofuels has increased in recent years, partly due to increases in gasoline as well as the concern over fossil fuel consumption and global warming. Currently, most ethanol is produced from the fermentation of corn-grain with the rest of the plant being discarded. A more environmentally acceptable way to produce ethanol for fuels is to use cellulose instead of grain starch as the feedstock for ethanol fermentation. An ideal plant to provide cellulose for this purpose is Switch Grass therefore does not need to be replanted. However, before committing to the use of Switch grass for use as a source for ethanol production, it is important to assess its photosynthetic properties since photosynthetic rates are directly correlated with how much cellulose a plant accumulates (e.g., biomass). We hypothesize that Switch Grass, as a naturally occurring plant species that has undergone continuous natural selection, will have superior photosynthetic qualities to corn, which is a domesticated, artificially selected crop species, and therefore superior to corn for use in producing ethanol. To test this hypothesis, we measured several important photosynthetic parameters in both Switch Grass and corn for comparing the overall photosynthesis potential of each respective species grown under optimal conditions. A summary of our tests and the final outcome of this study will be presented in detail.

210
Title: Estrogen Levels in the Water of the Red River Valley
Presenter(s): Therma Apiaygel, Leah DeSchepper, Tara Eichhom
Department: BIOL
Advisor: Ellen Brisch
Abstract: Environmental endocrine disruptor compounds (EDCs) interfere or mimic natural hormones that are responsible for maintenance, reproduction, development and/or behavior of an organism. Estrogenic substances are an example of EDCs mimicking the female sex hormone estrogen. Estrogenic substances have been identified in rivers and lakes associated with municipal and agricultural run-off. We propose to test waters from several lakes and rivers in the Red River valley for levels of estrogen. Our hypothesis is that estrogen levels will be highest in areas of municipal and rural run-off compared to more pristine environments.

211
Title: Significance of the Teocalli Monument
Presenter(s): Colleen Marsh
Department: ANTH
Advisor: George Holley
Abstract: The Teocalli Stone is an Aztec monument made to commemorate the New Fire Ceremony of 1507, which occurred every fifty-two years and was regarded as a time when the end of the world may occur. It depicts a unique combination of sixteen images and five date glyphs connected to various themes from mythology and religious beliefs. Since it was found at the Palace of Montezuchoz II, and given its throne-like shape, it is regarded by some as a ceremonial throne. Those who look deeper suggest that the monument encode a symbolic representation of the Aztec empire and world view. Regardless of the function, the monument is one of the more important Aztec works of art.
Title: Free Trade Block Comparison of the North American Free Trade Agreement (NAFTA) and the Association of South East Asian Nations (ASEAN)

Presenter(s): Ross Aldenalder
Department: ECON

Advisor: Zachary Machunda

Abstract: We intend to compare the association of South East Asian Nations Free Trade Area with the North American Free Trade Agreement. We will explore the logic behind free trade to understand why these agreements were made. We will determine the effects if any; these agreements have had on the nations and people that fall under them.

Title: Sustainability initiatives in the Costa Rican coffee industry in need of reform

Presenter(s): Susan Bury, Philip Haugrud, Erica Herfindahl
Department: BiOL

Advisor: Linda Fuselier

Abstract: Sustainability initiatives have become increasingly popular both by producers and consumers in the coffee industry. This is due in part to environmental concerns and also to premiums provided to farmers for producing organic or other sustainable forms of coffee. Organic agriculture is defined as farming without use of synthetic pesticides, fertilizers, or other compounds, and other sustainability initiatives operate on similar premises. Currently, more than half of the world’s coffee is produced by Latin American countries, and only one percent of that has been certified as sustainable. In Costa Rica, that is one percent. Organic coffee and other sustainability initiatives have been shown to provide valuable direct and indirect benefits to producers. However, there is a question that increased production of sustainable coffee will cause a decrease in consumer incentive to pay more for an expected service. Sustainable coffee initiatives are also under siege from diluted private and voluntary standards which are often simple marketing ploys that do not change the way coffee is produced. All these factors point to a need for reform in the way Latin American countries including Costa Rica go about doing sustainable agriculture.

Title: Energy Policy Act 2005

Presenter(s): Eric Hoban
Department: POL

Advisor: Barbara Headrick

Abstract: I will be looking at the Energy Policy Act of 2005. In my analysis, I want to look at how it went through the process of formulation in the House and Senate, and also how it’s being implemented today in America. Also, does it have an effect and what are its goals. The issues on this topic are critical to the world we live in and future generations will have to deal with it, so it’s ideal to have good policy to support this topic.

Title: Don’t Ask Don’t Tell

Presenter(s): Alexandra Robertson
Department: POL

Advisor: Barbara Headrick

Abstract: The presentation will be over the public policy of Don’t Ask Don’t Tell. It will explain why it was originally passed and what the expectations for it were. It will then explain what the actual outcome of the policy was. Also, the agenda setting and debate present day over Don’t Ask Don’t Tell and the likelihood of it being overturned.

Title: Probing the Pyruvate Phosphate Dikinase Regulatory Protein for Protein Phosphatase Structure

Presenter(s): Margaret Zimmerman
Department: BIOL

Advisor: Chris Chastain

Abstract: In plants with C3 and C4 photosynthesis, the chloroplast enzyme pyruvate orthophosphate dikinase (PPDK) catalyzes the conversion of pyruvate to phosphoenolpyruvate (PEP). Its activity in chloroplasts is upregulated in response to light via reversible phosphorylation of a threonine residue in the PPDK active-site. The PPDK regulatory protein (RP) catalyzes this light-regulated reversible phosphorylation. In several respects, RP is a most unusual, bifunctional protein kinase/protein phosphatase for which the gene has only recently been cloned. For example, when the primary amino acid sequence of RP was bioinformatically analyzed, structure common in protein kinases or protein phosphatases was absent. Instead, RP was shown to belong to a group of enzymes termed DUF 299 (domain of unknown function). Hence, nothing is known concerning the mechanism of how the enzyme carries out its catalysis. Our research project is aimed at understanding which part of the enzyme is involved in the protein phosphatase activity. Specifically, we are using site-directed mutagenesis of select RP amino acids that were suggested by bioinformatic analysis to be important for protein phosphatase activity. By changing these amino acids, we hope to uncover which part of the enzyme carries out phosphatase function. This will be experimentally achieved by testing the recombinantly produced mutant RP enzymes for loss of protein phosphatase activity using an unique immuno-based RP enzyme assay.

Title: A comparison of forest tree diversity between tropical and temperate rainforests.

Presenter(s): Andrew Ross
Department: BIOL

Advisor: Linda Fuselier

Abstract: A comparison of forest tree diversity between tropical and temperate rainforests. A tropical forest has the highest amount of tree diversity in the world, often 40 to 100 or more species per hectare. Our question is: why do tropical rainforests have such a high diversity of trees? Many hypotheses exist that attempt to explain the biodiversity of the tropics. This paper will compare and contrast tropical forests with a temperate rainforest to demonstrate which factors account for the higher amount of tree diversity in the tropics. This project will examine regional climate including rainfall, temperature, and storm frequencies, the geological history including succession and also the species of trees will be examined including phylogeny, variation and life stages. These physiological parameters will be compared and contrasted between the tropical rainforest and temperate rainforests. Examples and references to peer reviewed papers will be used to help explain the differences in biodiversity.

Title: Plant Physiology Laboratory 2008: A comparative investigation into the photosynthetic properties of Com and Switch Grass.

Presenter(s): Molly Dowling, Eric Hanson, Rory Oxton
Department: BIOL

Advisor: Chris Chastain

Abstract: Interest in ethanol based biofuels has increased in recent years, partly due to increases in gasoline as well as the concern over fossil fuel consumption and global warming. Currently, most ethanol is produced from the fermentation of corn-grain with the rest of the plant being discarded. A more environmentally acceptable way to produce ethanol for fuels is to use cellulose instead of grain starch as the feedstock for ethanol fermentation. An ideal plant to provide cellulose for this purpose is Switch Grass (Panicum virgatum). It is native to our prairies, grows on marginal lands, is perennial and therefore does not need to be replanted. However, before committing to the use of Switch grass for use as a source for ethanol production, it is important to assess its photosynthetic properties since photosynthetic rates are directly correlated with how much cellulose a plant accumulates (e.g., biomass). We hypothesize that Switch Grass, as a naturally occurring plant species that has undergone continuous natural selection, will have superior photosynthetic qualities to corn, which is a domesticated, artificially selected crop species, and therefore superior to corn for use in producing ethanol. To test this hypothesis, we measured several important photosynthetic parameters in both Switch Grass and corn for comparing the overall photosynthesis potential of each respective species grown under optimal conditions. A summary of our tests and the final outcome of this study will be presented in detail.
Abstract: This study will examine the Duperow Formation (from the subsurface of Western North Dakota to get more information on the environmental and climatic conditions of the this part of North America approximately 350 million years ago. This is an important time for this area of North America because it was tropical and covered periodically by a shallow sea. The area of study in Western North Dakota had deeper seas and therefore has the best sediment record of this time period. The transgression and regression of the sea can be read through the rock record, by analyzing well logs and core samples. These cores have been studied by visiting the Wilson M. Laird Core and Sample Library. It is important to understand the transgression and regressions because transgressions in the rock tell of global climate warming. This is the same for regressions showing that sea level fell and climate was cooling. After examining many cores and well logs from relative close locations, we are correlating this data over a wide spread area so we can plot the major and minor transgressions and regressions of the ocean that resulted in the deposition of the Duperow. All of this research is important because understanding the past is the key to understanding what is happening today and in the future with climate change. Another important factor of this formation is that the oil that is being drilled in North Dakota comes from this time period. Knowing the stratigraphy is key in the economics of North Dakota as well. The stratigraphy study will provide a temporal and spatial framework for paleontological studies. This further study is also important because it is more concrete data of the climate change of the time. It will be accomplished by studying and analyzing the fish teeth from the cores.

Title: Push vs. Pull Supply  
Presenter(s): Alisha Haugen, Jason Ritchie, Peter Wiederholt  
Department: MGMT  
Advisor: Ashish Gupta

Abstract: We will be showing advantages and disadvantages to both techniques. Historical uses by companies and the effect the technique had on the company. Finally giving examples of how the techniques should be used and for what kind of companies.

Title: The Problem with School Funding  
Presenter(s): Alison Orgaard  
Department: ED  
Advisor: Steven Grineski

Abstract: In a letter to a politician, certain problems with school funding are deconstructed on the federal, state and local levels with suggested solutions.

Title: The Effects of Tourism on the Nicoya Peninsula, Costa Rica By: Heather, Justin, Renee, Jesse and Julie  
Presenter(s): Justin Olson  
Department: BIOL  
Advisor: Linda Fuselier

Abstract: The Effects of Tourism on the Nicoya Peninsula, Costa Rica Beach erosion due to rising sea levels is compounded by pollution and over development of the water’s edge and is a threat to coastal areas world wide. The Nicoya Peninsula, in Costa Rica is a beautiful, solitary beach with little tourism traffic. However, roads and transportation to this area are improving and tourism is becoming an important part of the local economy. The Nicoya Peninsula provides an interesting case study on the negative effects of overdevelopment, including destruction of natural habitat for local flora and fauna compared to the positive effects of improving quality of life to local people that depend on the tourism trade for their livelihood.

Title: BNCT: Boron Neutron Capture Therapy  
Presenter(s): Eric Bergst, Jason Lohse  
Department: CHEM  
Advisor: Gary Edverson

Abstract: An attempt to make a boron containing beta aspartic acid was the main focus point; however, after trial sec-butyl lithium proved to be insufficient enough in one of the chemical pathways that was required to make the aspartic acid. The exploration of why sec-butyl lithium failed is now being explored, tri-butyl lithium a known stronger base than that of sec-butyl lithium will now be used. The tri-butyl lithium shall be used, and the chemical pathway that is observed shall be recorded. From this, it is hoped that beta aspartic acid is created, a new boron containing reagent is created, and from it other possible amino acids due to electrophilic and nucleophilic applications with the Donaldson’s reagent.

Title: The abiotic induction of systematic acquired resistance (SAR) in Cucumis sativus alters cell wall structure and biochemistry: Evidence for interactions between the plant and its environment  
Presenter(s): Philip Haugrud  
Department: BIOL  
Advisor: Andrew Marry

Abstract: Soil-borne pathogens have been known to cause substantial loss of cropland productivity. Systematic acquired resistance (SAR) is the response of a plant to inoculation by a chemical the plant associates with a pathogen and is roughly analogous to vaccination in humans. Salicylic acid has been shown to play a key role in signal-transduction of SAR. In this study, the cucumber Cucumis sativus was treated with salicylic acid in order to determine how SAR can cause a strengthening of the cell wall in plants. FTIR spectroscopy was used to measure the amount of novel proteins and carbohydrates induced by salicylic acid treatment. Biochemical assays were done to test for changes in peroxidase activity. Enzymes that break down the cell wall such as pectinase and cellulase were used to determine changes in overall cell wall durability. It was found that plants treated with salicylic acid had more proteins and carbohydrates in their cell walls, more active peroxidases, and more resistant cell walls. Treatment of SAR-induced plants with calcium nitrate was found to reverse the response. These findings suggest that natural chemicals that cause SAR could be investigated as alternatives to dangerous synthetic chemicals in decreasing loss of cropland productivity.
Title: Behavioral response of the green damselfly, Anax junius, to conspecific and predator chemical signals

Presenter(s): Eric Hanson
Department: BIOL
Advisor: Linda Fuselier

Abstract: Predator-prey dynamics are a prevalent environmental factor, which species must cope with, in order to survive (Sh et al. 1985). Typically aquatic organisms begin life as potential prey and then undergo a size-based niche shift that may eventually lead to cannibalism (Ferris and Rudolf 2007). So, it is beneficial to only display anti-predator behavior in the presence of a predator (Ball and Baker 1996, Lima 1998, Turner 2004). But, when predation is high, a strong selection pressure for prey to display accurate anti-predator behavior is present (Lima and Dill 1990. Sh 1986). One way aquatic organisms detect predation is chemical cues (a chemical released when an organism is consumed), which can diffuse at different rates through water, and provide information about predation risk to animals living in aquatic habitats, especially in visually poor environments (structured habitat, turbid water, etc.) where many aquatic invertebrates coexist (Hara 1992, Smith 1992, Dodson et al. 1994).

Invertebrate populations display learned recognition of predator species, which may have resulted from evolved genetic differences between populations or differing selection pressures (Chivers and Smith 1994). During most of the year, many different size classes of odonates co-occur in the same environment (Kormonady and Gower 1965, Luz 1968, Parr 1970, Paulson and Jenner 1971, Benke and Benke 1975, Benke 1976, Ingram 1976, Ingram and Jenner 1976, Pritchard 1980), and are susceptible to cannibalism and intraguild predation (IGP). Cannibalism in dragonfly larvae can be responsible for 97% of the total mortality. This represents a major factor that regulates odonate populations (Anesh, 1994, Crowley et al. 1987, Johnson et al. 1985, 1987).

My research will focus on determining if Anax junius is capable of detecting conspecific chemical cues that indicate a predator event. I will also be testing to see if it is possible to condition them to a novel predator cue. Two treatments will be used: 1) conspecific cue, and 2) fish odor and conspecific cue as a conditioning event, and then just fish odor to determine if they are able to learn anti-predatory behavior from a predator's chemical odor. In treatment 1 it is expected that A. junius will respond with anti-predatory behavior of less feeding strikes, head turns, and walking movements. In treatment 2, it is expected they will respond to fish odor after just one conditioning event, and exhibit anti-predatory behavior when only fish odor is present.

Title: Examining the Kinase Activity of the PPKD Regulatory Protein: In Search of a Functional P-loop

Presenter(s): Susov Dhakal, Jason Tan, Shannon Wendroth
Department: BIOL
Advisor: Chris Chastain

Abstract: The plant enzyme, pyruvate orthophosphate dikinase (PPKD), is a cardinal enzyme of the C4 pathway that can reversibly convert pyruvate to phosphoenolpyruvate (PEP). It is the most abundant of C4 enzymes, comprising up to 10% of the soluble protein of C4 leaves, and thus may exert a limitation on the rate of CO2 assimilation into the C4-cycle (Chastain, 2007). PPKD is regulated in dark and light periods by a Regulatory Protein (RP) which operates by reversible phosphorylation of an active site threonine residue.

Additionally, a second regulatory protein (RP2) exists which lacks the ability to dephosphorylate PPKD. Preliminary bioinorganic analysis of RP's primary sequence reveals the presence of a glycine-rich P-loop motif. Site-directed mutagenesis of key residues in the P-loop will be conducted to determine whether the P-loop is contributing to RPs kinase activity. RP's kinase activity will be measured by a series of biochemical assays including Western blotting and spectrophotometry. We hypothesize that changing the P loop will disrupt RPs ability to function as a protein kinase.

Title: Using microsatellites to examine two behaviorally divergent populations of Anax junius, a migratory dragonfly

Presenter(s): Tyson Bontkowski, Bodini Herath
Department: BIOL
Advisor: Michelle Malott

Abstract: Anax junius, more commonly known as the common green damselfly, has aquatic larvae from which develop two types of adults, one that migrates to Florida and another that stays in Minnesota. Residents overwinter in Minnesota as larvae, whereas migrants develop in approximately 3 months, and fly to Florida to reproduce. We are investigating whether these two developmental cohorts, residents and migrants, are genetically distinct. We used microsatellite loci as genetic markers to distinguish between the cohorts. We collected dragonfly larvae at the MSUM Regional Science Center in summer/fall 2006. We used a CTAB extraction method to isolate DNA from Anax junius abdomen tissues. We used PCR to amplify microsatellite loci and a Beckman-Coulter CEQ DNA analyzer to visualize DNA fragments. We successfully amplified microsatellite loci using four different primers and are progressing toward our project goal.

Title: Searching for cryptic Species within the genus Metzgeria using sequence data and ISSRs

Presenter(s): Mariah Clements, Whitney Sorensen
Department: BIOL
Advisor: Linda Fuselier

Abstract: Liverworts have traditionally been a largely overlooked group of organisms in the fields of molecular and evolutionary biology. Though they are among the earliest land plants and their genetic maps could provide valuable information about the evolutionary sequence of plant life, they remain scarce in scientific literature. The genus Metzgeria is a thalloid liverwort found in moist, shady habitats all over the world. We used the CTAB DNA extraction technique to get DNA from Metzgeria samples of various species loaned from all over the world. We then amplified the trnL, trnM, gsbA and ppsB in the Metzgeria genome. Using these DNA sequences we then formed an evolutionary tree for the genus Metzgeria. Preliminary results indicate that some of the species of Metzgeria are paraphyletic with respect to origin. In particular, some species shared between North America and Europe do not form monophyletic clades. This may be an indication that there are cryptic species in this genus and the number of species may be underestimated.

Title: The Constitutional Challenges to the Lethal Injection

Presenter(s): Naomi Turman
Department: POL
Advisor: Paul Kramer

Abstract: Since 1888, the execution of criminals has been a significant component of the American legal system. The execution process denies individuals one of their most fundamental human dignity, amount of pain experienced, risk of pain, and current legislative trends in execution process. Currently, the most commonly used execution method is the lethal injection. Recently, this procedure has gained a significant amount of attention due to the chemicals involved and the vague protocols that have been established. In my research, I will focus on the constitutional challenges of the lethal injection, comparing and contrasting the "cocktail" used by each state. Finally, I will review the suggestions made by experts that would reduce the challenges to the lethal injection.

Title: Proposal on Domestic Energy Development Policy

Presenter(s): Kayleigh Johnson
Department: POL
Advisor: Barbara Headrick

Abstract: For my POL 341 (with Headrick) term paper, I am analyzing the policy that is currently around involving the development of domestic energy sources. In my paper I will identify why this policy is being debated, actors involved in the formation of the public policy, the
Title: The Evolution of SCHIP
Presenter(s): Justin Norris
Department: POL
Advisor: Barbara Headrick
Abstract: This paper will focus on the recent attempt by the US Congress to pass legislation that would modify the policies involving the State Children's Health Insurance Program, also known as SCHIP, and its implementation. It will explore the history of this particular legislation and how its proposed changes would deviate from current policy. Furthermore, this paper will attempt to ascertain the reasons why the Democrats in Congress put this proposal on the national agenda, and why their attempt was a failure. Finally, this paper will gauge the feasibility of Congress passing similar changes to the SCHIP program in the future.

Title: Endangered Species Act - Still Controversial 35 years Later?
Presenter(s): Rebecca Sang
Department: POL
Advisor: Barbara Headrick
Abstract: Ever since its implementation in 1973, the ideological Endangered Species Act has been controversial. It is a meticulous example of the battle between interests and principles that most policymakers encounter. Environmental policy always involves trade-offs between environmental values, solution feasibility, and economic development. Although the ESA has stabilized many near-extinct populations, multiple unintended negative consequences arose. This Act has quite a political history. Congress has passes similar preservation acts in 1966, 1969, 1973, and eventually the Endangered Species Act was passed later in 1973, which combined the provisions of the prior laws. Since then, more provisions have been added in order to more fully preserve and protect species and habitats on the verge of extinction. The debate rages on as economists and environmentalists continue to butt heads over the enforcement of the ESA. The controversy regarding the ESA stem from its criteria for listing and de-listing species, government restrictions, and most importantly, regulation without compensation for landowners.

Title: Cross-cultural Communication and Its Relation to International Marketing
Presenter(s): Kimberly Swol
Department: MKTG
Advisor: Ruth Lumb
Abstract: Cross-cultural communication is important to any international business, especially in marketing. So why is it seems to be a hard subject for business people to understand from time to time? The purpose of this presentation is to give a general overview of cross-cultural communication in relation to international marketing. The following points will be covered: What is cross-cultural communication and why is effective cross-cultural communication so important to international marketing? How can or has poor cross-cultural communication affected those involved? Do languages other than English really matter with international marketing? Doesn't American culture spread globally like our products? How can we avoid the obstacles that could result in poor cross-cultural communication?

Title: Risk Assessment Behavior of Zebrafish with Introduction of Alarm Cue
Presenter(s): Jacob Jensen, Kristine Knoll
Department: BIOL
Advisor: Brian Wisenden
Abstract: Many fish assess risk by means of alarm cues. If the skin of a fish is punctured by a predator an alarm cue is released that warns others nearby of predator presence. Zebrafish were used to observe this behavior. Trials were run without and with alarm cue presence in stream tanks that simulated stream like settings. The position of the fish was recorded for each trial and protective shelter use was noted.
243
Title: Operations Management at Casino
Presenter(s): John Syvertson
Department: BUS
Advisor: Ashish Gupta
Abstract: In this paper we want to discover and explain how managers in casino control the gambling as well as the hotel side. We want to look at how security, employees, and guests are managed at a casino.

244
Title: How to use technology in Accounting
Presenter(s): Erika Gomez
Department: MGT
Advisor: Ashish Gupta
Abstract: We will discuss how technology can be used in accounting by focusing on XBRL, an international information format that is designed to facilitate the automatic exchange and reliable extraction of business information. We will explain in detail what XBRL is, its potential users and how it can benefit companies and other producers of financial data. In doing so, we will demonstrate why this is the future of financial reporting.

245
Title: Disability and Stratification: Comparing Two Perspectives
Presenter(s): Lindsay Bergenheier
Department: SOC
Advisor: Susan Humphers-Ginther
Abstract: This session explores the relationship between socioeconomic status and predisposition to disability. Two hypotheses are compared. The first, social drift theory, states that disability has a negative effect on socioeconomic status through the costs incurred for care, both to the individual and their family. The second, social stress theory, states that the hazards of poverty greatly increase the changes that individuals will develop disability. Discussion will include how these two theories relate to one another and in many cases work simultaneously to make disability an issue that disproportionately impacts the lower classes.

247
Title: Climate Security Act
Presenter(s): Brad Johnson
Department: POL
Advisor: Barbara Headrick
Abstract: Provided an outline, needs an abstract - Justin

248
Title: Reauthorization and Improvement [?] Act of 2005: Patriot Act
Presenter(s): Nicholas Boushee
Department: POL
Advisor: Barbara Headrick
Abstract: My research paper seeks to answer several questions about this controversial public policy. Where the policy originated from? Who are the players that were involved in the policy formation and how do they back this policy? How has politics affected the policy and its process through formulation? Why the policy is being debated? What problem(s) the policy is aimed at addressing and how it goes about “solving” the issues? What the future of the policy looks like? – will it be replaced or gotten rid of all together?

249
Title: Changes in No Child Left Behind
Presenter(s): Chance Stribbing
Department: POL
Advisor: Barbara Headrick
Abstract: I'll be doing a brief oral presentation on the proposed changes to the No Child Left Behind Act.

250
Title: The Carbon Tax
Presenter(s): Justin Moen
Department: POL
Advisor: Barbara Headrick
Abstract: The Carbon Tax is a tax on the carbon dioxide emission from the burning of fossil fuels. In an attempt to slow global warming effects worldwide, many legislators in the United States have backed the implementation of a tax based on the amount of carbon emissions given off from different fossil fuel sources ranging from: natural gas to petroleum products to coal. This paper will analyze the components inherent in the Carbon Tax proposals, from the reasons given by advocacy proponents of the legislation to the roadblocks it faces in implementation. It will focus on the origination of the proposals and the problems to which the Carbon Tax is focused on.

251
Title: Queer American Literature
Presenter(s): Rebecca Sorgert
Department: ENGL
Advisor: Hazel Retzlaff
Abstract: Literature provides a lens to view culture. Queer American Literature’s themes focus on oppression, isolation, sexuality and gender, and intersections in multifaceted forms of lifestyles. Texts and writers are usually seen as subservient due to many readers, and people not even willing to read these works, seeing the content, form, and voice as controversially breaking societal norms. Audre Lorde, Adriene Rich, Allen Ginsberg, Tennessee Williams, Gertrude Sline, and others diagnose and deconstruct heteronormative sentiments through their words.

252
Title: An Examination of “Glass-Ceiling” Barriers by White Women and African-American Women in Corporate America
Presenter(s): Naomi Turman
Department: ECON
Advisor: Zachary Machunda
Abstract: The “glass-ceiling” is a phenomenon that prevents women managers from rising to top executive positions in corporate America. Using the last decade in the United States, we will illustrate the changes in the underrepresentation of women in high-level management in American corporations. Our focus will be on whether the “glass-ceiling” barriers affect white women and African-American women to the same degree. In addition, we will examine whether the barriers are across races or if they are strictly limited to gender. Finally, we will review the policies created to shatter the “glass-ceiling” barriers in effort to produce equality in executive roles in corporate America.

253
Title: The Revolution of Crack-Cocaine Sentencing
Presenter(s): Julianne Lowe
Department: POL
Advisor: Paul Kramer
Abstract: In 1986 Congress enacted mandatory minimum sentencing laws, which force judges to deliver fixed sentences to individuals convicted of a crime, regardless of culpability or other mitigating factors. Federal mandatory drug sentences are determined based on three factors: the type of drug, weight of the drug mixture (or alleged weight in conspiracy cases), and the number of prior convictions. Judges are unable to consider other important factors such as the offender’s role, motivation, and the likelihood of relapse. Only by providing the prosecutor with “substantial assistance,” (information that aids the government in prosecuting other offenders) may defendants reduce their mandatory sentences. This creates huge incentives for people charged with drug offenses to provide false information in order to receive a shorter sentence. Recently, legislation was passed that would change these mandatory minimums by lessening the jail time of individuals convicted with crack-cocaine as opposed to powder cocaine. Criminals that have been held in prisons for the offense of possession or distribution of crack-cocaine and have completed the time under this new legislation will be released into society, this could potentially be 100,000 inmates. This paper will examine the consequences of releasing such individuals and the impact this decision will have on the jail system and society. Through this paper I will examine the history of mandatory minimums and offer possible solutions to concerned citizens concerned this subject-matter.

254
Title: Juvenile Justice
Presenter(s): Shannon Grossandorf
Department: LGST
Advisor: Paul Kramer
Abstract: Juvenile court system has changed a lot since beginning in 1893. My focus will be looking at different states to determine if sentencing procedures are the same. I will demonstrate the
differences and similarities between states. In addition I will examine the outcomes of sentencing juveniles to jail for long periods of time, life imprisonment without possibility of release, and the death penalty.

255
Title: The Meiji Era: A Turning Point in Japanese Culture
Presenter(s): Douglas Mattis
Department: JAPN
Advisor: Chizuko Shashti
Abstract: In any society change is inevitable. From the beginning of the 17th century to 1688, Japan was ruled by a feudalistic government called the Tokugawa Shogunate. During this period, Japan was isolated from the world, allowing no foreigners in. However, that all began to change in 1853 when the western ships arrived in what is now Tokyo Bay. After that day, the country began to change and in 1868 the Tokugawa Shogunate had been replaced by a new Emperor. The Meiji period, which is considered to be Japan's modern era, has been looked at by some as Japan's golden age due to its rapid industrialization and development. This time period saw Japan change from a feudalistic, rural society to an urban, industrialized one.

256
Title: Women Unemployment in United States and Europe from the year 1970-1990
Presenter(s): Olesya Kurilo, Subhechhaya Shrestha
Department: ECON
Advisor: Zachary Machunda
Abstract: The poster is based on the analysis and comparison of women unemployment in United States and Europe from the year 1970-1990. During these years, the European women were less likely to get involved in the labor force which increased the gap between the European and American unemployed women to 7% by 1990. Compared to US born women, European women had steady wages and unemployment. European women lagged behind American women in size of working age population, having jobs even though employment had risen progressively in both the United States and Europe.

257
Title: Immigration
Presenter(s): Natalie Fernandez-Mejia
Department: AMCS
Advisor: Yolanda Arauza
Abstract: Immigration is a hot topic that even the current Presidential Candidates cannot ignore, yet immigration has been an issue since the forming of the United States borders. What has changed, what has stayed the same and what impact has it had on citizens and immigrants alike?

258
Title: An Online Digital Portfolio: Constructing a simple but elegant presentation of your work
Presenter(s): Jessalyn Brown, Penny Kelley
Department: MC
Advisor: Pragee Radecki
Abstract: Whether creating an art or photography portfolio, or a slideshow for a client or family member; this workshop will show you how to quickly build a Flash and html-based slideshow that does not require any experience with either software program.

259
Title: Plant Physiology Laboratory 2008: A Comparative Investigation into the Photosynthetic Properties of Corn and Switch Grass
Presenter(s): Tyler Fluto
Department: BIOL
Advisor: Chris Chastain
Abstract: Interest in ethanol based biofuels has increased in recent years, partly due to increases in gasoline as well as the concern over fossil fuel consumption and global warming. Currently, most ethanol is produced from the fermentation of corn-grain with the rest of the plant being discarded. A more environmentally acceptable way to produce ethanol for fuels is to use cellulose instead of grain starch as the feedstock for ethanol fermentation. An ideal plant to provide cellulose for this purpose is Switch Grass (Panicum virgatum). It is native to our prairies, grows on marginal lands, is perennial and therefore does not need to be replanted. However, before committing to the use of Switch grass for use as a source for ethanol production, it is important to assess its photosynthetic properties since photosynthetic rates are directly correlated with how much cellulose a plant accumulates (e.g., biomass). We hypothesize that Switch Grass, as a naturally occurring plant species that has undergone continuous natural selection, will have superior photosynthetic qualities to corn, which is a domesticated, artificially selected crop species, and therefore be superior to corn for use in producing ethanol. To test this hypothesis, we measured several important photosynthetic parameters in both Switch Grass and corn for comparing the overall photosynthetic potential of each respective species grown under optimal conditions. A summary of our tests and the final outcome of this study will be presented in detail.

260
Title: Effect Of Carbon Monoxide On Liquidus Temperatures Of Silicate Melts At 1-ATM Pressure
Presenter(s): Elicia Hay
Department: GEOS
Advisor: Russell Colson
Abstract: Carbon monoxide has an influence on the liquidus temperature of silicate melts. The liquidus is a line on a graph, which is the curve that connects the temperatures at which a liquid solution is in equilibrium with its vapor and with the solid solution. The compositions we chose to examine had expected liquidus around 1400°C, 1500°C, and 1600°C. To narrow in on the liquidus we decreased the T of crystal free melt until crystals formed. Then we raised the T of the melt with crystals until they melted. This produced a set of reverse experiments that bracketed the true liquidus temperatures. Experiments have been conducted by placing a small bead of the sample in a carbon dioxide rich atmosphere and lowering in on the liquidus, and then using the same technique in a carbon monoxide rich atmosphere. Carbon monoxide atmosphere causes melt to crystallize at a different temperature than carbon dioxide. The results show there is only an affect in compositions with higher liquidus. This goes along with previous geologists, which have only done experiments in lower temperature compositions, and shown no influence of the carbon monoxide, scientists have calculated the interior of the moon and the calculations were based on the liquidus temperature not being influenced by what type of gas was present. The carbon monoxide having an influence at the higher temperature compositions is the opposite of what is expected, and could change what scientists have calculated as far as the moon's interior is concerned.

264
Title: Variation in glucosinolate levels in Brassica rapa (Wisconsin fast plants)
Presenter(s): Elizabeth Jagol
Department: BIOL
Advisor: Alison Wallace
Abstract: Brassica rapa, a plant species that is a member of the mustard family, has been shown to genetically vary in a number of physical characteristics such as height, leaf coloration, and trichome number. We are looking at genetic variation in their secondary
defensive compound levels. Specially we are measuring glucosinolate levels indirectly by quantifying the glucose released by hydrolysis with the enzyme myrosinase upon leaf damage. Results will be shared of this work in progress.

265
Title: Anishinaabe Ethnobotany Presentation
Presenter(s): Andrew Geston
Department: AMCS
Advisor: Wendy Geniusz
Abstract: The display will contain craft works and descriptions of methods used in the creation of Anishinaabe Native American style projects.

266
Title: Anishinaabe Culture: An Insight into Daily Living
Presenter(s): Ashlie Dalen
Department: AMCS
Advisor: Wendy Geniusz
Abstract: This will be a display of traditional items that were used for daily living among the Anishinaabe people.

268
Title: Creating the Student Academic Conference Promotional Video
Presenter(s): Patrick Joyner
Department: FILM
Advisor: Kyja Kristjanson-Nelson
Abstract: Kyja Kristjanson-Nelson was approached by the Student Academic Conference committee members to produce and develop a video piece presenting all aspects of the conference. The video needed to appeal to future and current students, but also be informative enough for academia. A casting call was put out for volunteers to work on the video. I volunteered, along with a few others, and have had a strong hand in almost every aspect of the creation of the piece: taping interviews, shooting footage at the conference, and editing multiple versions of the video. My presentation will focus on the development process, by showing the final video and discussing the techniques of shooting and editing a documentary style promotional video.

273
Title: "If the Genes Don't Fit, You Must Acquit:" A Look at PAternity Fraud Legislation in California
Presenter(s): Trisha Dewar
Department: POL
Advisor: Barbara Headrick
Abstract: My presentation will encompass an in-depth look at paternity fraud legislation in the state of California. I will include in my presentation, the definition of paternity fraud, the history of laws pertaining to paternity fraud, and recent legislation that has been passed in regards to paternity fraud.

274
Title: America as Reflected in African-American Literature
Presenter(s): Ian Cole, Ellie Musselman, Valerie Roberts
Department: ENGL
Advisor: Hazel Retzlaff
Abstract: America does not mean the same thing to everyone. A panel of students from Prof. Retzlaff's class will discuss the portrayal of American society as it is seen in the works of several African-American writers. Several themes will be discussed, such as the brutality of the slave system, the hypocrisy of Christianity as it relates to slavery and the Jim Crow South, and the dual identity as both an American citizen and a black individual. A combination of literary evidence and historical contextualizations will be used to convey the different perspective of the African-American author.

275
Title: Applications of RFID Technology in Healthcare
Presenter(s): Kristopher Karls, Rebecca Kelbert, Krystal Stein
Department: MGMT
Advisor: Ashish Gupta
Abstract: Radio frequency identification (RFID) technology is predominantly thought of in connection with material goods such as clothing, bus passes, etc. However, it can be used in other services like healthcare as well. Several surgeons use RFID technology to verify patients’ information before beginning surgery, thus reducing the likelihood of mistakes. When SARS was a big issue, several hospitals contemplated using RFID to track patients hoping it would help them stop the spread of illness more quickly. This study will provide a review of RFID technology and examine its many uses in healthcare industry.

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Title: How can IT be used to improve homeland security
Presenter(s): Michael Zorich, Derick Hermanson, Brent Zuehlsdorff
Department: MGMT
Advisor: Ashish Gupta
Abstract: In this presentation we will discuss in what ways information technology can improve homeland security. We go in depth and discuss how it is currently being used. As well as how building a homeland security infrastructure can prevent threats from outside invaders.

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